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TEACHERS' MANUAL

AND

COURSE OF STUDY

FOR THE

COMMON SCHOOLS

OF THE

STATE OF WASHINGTON.

BY AUTHORITY OF THE

STATE BOARD OF EDUCATION.

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.....County, Wash.

OLYMPIA, WASH.:
GWIN HICKS, - - - STATE PRINTER
1900.

TEACHERS' MANUAL,

AND

COURSE OF STUDY,

WITH

RULES AND REGULATIONS,

ADOPTED BY THE STATE BOARD OF EDUCATION FOR THE US
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INTRODUCTION.

At the beginning of another period of five years for which new text books are selected for the common schools, it becomes necessary to prepare a course of study in harmony with the progress of the educational thought of the state. In this manual it is thought best to make some departures from the previous manuals issued by the state, for the following reasons:

1. The plans of the past have prepared for certain progressive changes.

2. The problems of education so admirably worked out by the city school systems of the country are worthy of a broader application, and should reach the rural schools.

3. The standard of the rural teacher is higher than before, and he is ready to take new ideas and plans into his work, and the inspiration will more than compensate for what of error they may contain, and which experience will soon correct.

4. The state of Washington has not yet become ultra conservative, and progressive thought, the "new education," is readily accepted by a receptive teaching body.

Hoping that exalted ideals, better morals, and a more patriotic citizenship will result from what this manual may inspire, I am,

Very truly,

FRANK J. BROWNE.

Superintendent of Public Instruction,

State of Washington.

P4549
E1224

PROVISIONS OF THE CODE OF PUBLIC INSTRUCTION.

POWERS AND DUTIES OF THE SUPERINTENDENT OF PUBLIC INSTRUCTION.

SEC. 22. The powers and duties of the superintendent of public instruction shall be—

Third: To prepare and have printed such blanks, forms, registers, COURSES OF STUDY, rules and regulations for the government of the common schools, questions prepared for the examination of teachers, and such other blanks and books as may be necessary for the discharge of the duties of teachers and officers charged with the administration of the laws relating to the common schools; and to distribute the same to the county superintendents.

POWERS OF THE STATE BOARD OF EDUCATION.

SEC. 27. The state board of education shall have power—

First: To adopt or to readopt, according to law, a special meeting to be called by the superintendent of public instruction, a uniform series of text books for the use of the common schools throughout the state.

Second: To prepare a COURSE OR COURSES OF STUDY for the primary, grammer and high school departments of the common schools, and to prescribe such rules for the general government of the common schools as shall secure regularity of attendance, prevent truancy, secure efficiency and promote the true interests of the common schools.

POWERS AND DUTIES OF COUNTY SUPERINTENDENTS.

SEC. 33. Each county superintendent shall have the power, and it shall be his duty—

First: To exercise a careful supervision over the common schools of his county, and to see that all the provisions of the common school laws are observed and followed by the teachers and school officers.

Fourth: To enforce the COURSE OF STUDY adopted by the state board of education.

POWERS AND DUTIES OF DIRECTORS.

SEC. 40. Every board of directors, unless otherwise specially provided by law, shall have power, and it shall be their duty—

Second: To enforce the rules and regulations prescribed by the superintendent of public instruction and the state board of education for the government of the schools, pupils and teachers, and to enforce the COURSE OF STUDY prescribed by the state board of education.

POWERS OF DIRECTORS OF GRADED SCHOOLS.

SEC. 73. In all such city and town districts where the number of children of school age is sufficient to require the employment of more than one teacher, the board of directors shall designate one of such teachers as principal, and such principal shall have general supervision over the several departments of his school. The school or schools in such city or town districts shall be graded in such a manner as the directors thereof shall deem best suited to the wants and conditions of such districts: *Provided*, THAT THE COURSE OF STUDY ESTABLISHED FOR SUCH DISTRRICTS SHALL NOT BE INCONSISTENT WITH THE LAWS OF THIS STATE.

POWERS OF DIRECTORS IN CITIES OF 10,000 OR MORE INHABITANTS.

SEC. 92. Every board of directors shall have the power, and it shall be their duty—

Second: To enforce the rules and general regulations of the superintendent of public instruction, and the state board of education; to prescribe the COURSE OF STUDY, the exercises, and the kind of text-books to be used IN ADDITION TO THE TEXT-BOOKS PRESCRIBED BY THE STATE BOARD OF EDUCATION FOR THE USE OF THE COMMON SCHOOLS OF THIS STATE.

DUTIES OF TEACHERS.

SEC. 54. Teachers shall faithfully enforce in the schools the COURSE OF STUDY and regulations prescribed.

PENALTIES.

SEC. 166. Any teacher who willfully refuses or neglects to ENFORCE THE COURSE OF STUDY or the rules and regulations required by the state board of education, shall not be allowed by the directors any warrant for salary due until said teacher shall have complied with said requirements.

SEC. 174. Any district using text-books other than those prescribed by the state board of education, or any district FAILING TO COMPLY WITH THE COURSE OF STUDY prescribed by the state board of education, or any district in which warrants are issued to a teacher not legally qualified to teach in the common school of the said district, SHALL FORFEIT TWENTY-FIVE PER CENT. OF THEIR SCHOOL FUND FOR THAT OR THE SUBSEQUENT YEAR, and it is hereby made the duty of the county superintendent to deduct said amount from the apportionment to be made to any district failing in either or all of the above requirements, and the amounts thus deducted shall revert to the general school funds of the state, and the county treasurer shall return the same to the state treasurer for reapportionment.

COURSE OF STUDY.

GENERAL PLAN.

Individuals differ in tastes and abilities. It is not reasonable to set the same limitations or to prescribe the same methods for all pupils and for all teachers. This applies equally to a system of schools administered by the state, the county, the city, or the village. The discretion of the individual teacher, and the abilities of the individual pupil largely determine *what* shall be studied, *when* it shall be studied, and *how* it shall be studied. This is well expressed by a contributor to one of the current school journals: "The most reasonable objection that can be made against a system of thoroughly graded schools is that, in grouping pupils of similar attainments into large classes, the *individuality* of pupils is not sufficiently recognized. There is danger of the teacher's overlooking the importance of reaching the mind, heart, and will of *each* scholar in a large class; of relying too much upon the general machinery of class work. In primary work, reliance upon the class system, entirely, is fatal to good results. The teacher must go down to the level of each pupil, and draw out their powers, test their capacity for observation and comprehension."

There is need, however of a course of study:

1. To assist in studying toward a definite end.
2. To assist in classification of pupils.
3. To lead along the direction of broader culture.
4. To articulate the departments of the state school system, and bring to it the advantages of better organization.
5. To overcome the evil of frequent change of teachers.
6. To give parents a basis from which to judge of the child's progress.

7. To minimize the text book and to MAGNIFY THE SUBJECT.

The course of study is made for the child—not the child for the course. It should be the constant aim of the teacher *to follow the course*, but the chief end in view should be the ultimate attainment of the pupil, and no teacher should feel restrained from exercising his or her *individuality* in bringing the pupil's mind in pleasant touch with the subjects to be taught. Keep in mind that "The letter killeth, but the spirit maketh alive."

In harmony with these general principles, this course has been formed with a view to the development of all the powers of the mind, and to minimize the waste of time and energy on the part of both teacher and pupil.

The physical body takes in food, then assimilates it, then acts upon the energy given by it. It is somewhat the same with the mind. The mind takes in knowledge, it judges and reasons from it, and finally acts upon it, gives expression to it. To this end, there is provided in this course of study:

1. Nature and science, for observation and research.
2. Mathematics, and to some extent formal grammar, to train in comparison and judgment.
3. Language, drawing, etc., to train in expression.

These three departments of study will develop the *individual*, but there is another line which pertains more to *society as a whole*, to the relation between individuals; hence, there is provided a course in

4. History and civics, to prepare for citizenship.

These four lines of study include all the subjects required for complete mental development and good citizenship.

CORRELATION OF SUBJECTS.

They are arranged to relieve the progam of many short recitations. By correlation the program may be simplified, and rural schools will approach the same degree of efficiency in all lines of work as is found in the well graded schools of the towns and cities.

1. The nature work and oral work in history should serve as development lessons for language and composition in the primary grades, and after a text in grammar is introduced, but three lessons a week should be devoted to formal grammar, and the grammar period for the remaining two days of each week should be devoted to the development of the history and science lessons, and composition work based thereon.

2. In the formal studies the recitation period should frequently be taken for outlines and written reviews of the subject, with special attention to proper paragraphing and composition.

3. Drawing should be frequently introduced to illustrate other subjects, and can be taught by correlating with nature work and oral history.

4. Writing, drawing, and music should be taught in the rural schools to all grades together. Also work in nature, physics, chemistry, etc., may be given for general exercises, all grades together.

5. The writing period should frequently be given to writing, as models of neatness, outlines, paragraphs, and essays on other subjects.

6. Mowry's Primary History is to be used in the fifth year as a reading book, alternating month by month, or in some other way, with the reader. In no case should it require an additional recitation period.

7. "Why We Vote" is to be used in the sixth year as a reading book, alternating in some suitable way with the reader. In no case should it require an additional recitation period.

8. In the eighth year the text in United States History should be finished, and followed by Dole's American Citizen. In no case should they require two recitation periods.

NOTE.—The terms "grade" and "year" are to be used to denote the amount of work usually required in a term or year of nine or ten months, and the course should be followed when possible with this in mind. But where there is so much difference in the length of time school is held in the rural districts, the "grade" or "year" cannot mean a *year of time*. They should, however, refer to a definite period in school life, and the

subjects required for that period should be taken collaterally, whether more or less than a year is required to complete them.

METHODS.

Organization makes a school system somewhat of a "machine." Educators everywhere object to this. That is, they object to becoming automatons, to subordinating their mental activities to the will of another. Some teachers will not be pleased with the text books selected for use, others will not be pleased with the course of study. But the most serious results follow when any supervisory authority attempts to limit teachers to some particular *method* of teaching, or *device* in presenting a subject. The minds of teachers and pupils are infinite in their variations; and the relations between them are so sacred, that they should be permitted to come into touch with each other and with each subject without any interference with their natural impulses. This manual, therefore, is not a book of *methods*. It is meant to inspire teachers in developing original methods, varying with each school, with each pupil. The Course of Study for the district schools of Michigan says of methods:

"The term *method* is a much-abused word. The true teacher 'sees the end from the beginning' and the pathway to it, then plans definite means to reach this end along the line of the least resistance. His every act has a purpose, clear and intelligent, directed toward this end. These acts, in the aggregate, constitute his *method*.

"Disconnected devices, no matter how helpful, do not constitute a method. It is a systematic application of connected plans that succeeds, whether in school, business, or professional life.

"In every successful school, closely allied to method in teaching, is method in *study*. The greatest teachers are those who not only arouse the minds of their pupils and create a thirst for knowledge, but also teach them how to search, investigate and know. Therefore the teacher should know *how*

his pupils study, correct their faults, and suggest methods of concentrating the mind and intensifying mental concepts.

"The steps in study are:

a. To select the central points.

b. To illuminate them with imagination.

c. To associate them with past knowledge.

d. To classify with each central point its system of lesser points that depend upon and reflect its truth.

e. To state them in exact language."

Teachers should be constant students of methods, as presented in current publications, and should avoid every tendency to become slaves to any one system, method or device. Education comes from *effort*, and effort comes from *interest*.

NATURE STUDY AND SCIENCE.

PURPOSES.—Pestalozzi makes observation the basis of all knowledge. The habit of observation acquired in childhood is of more value than memorized pages or analyzed problems. But reading should go hand in hand with observation, the one reinforcing the other. Certain definite results will be reached which go largely to fix the character of the pupil.

The reasons for Nature study are:

1. To arouse and establish a sympathy with Nature.
2. To train in observing, comparing, and expressing.
3. To develop a taste for the beautiful and ethical.
4. To acquire classified knowledge.

METHODS.—There is so much literature at the command of teachers, that it is superfluous to make extended suggestions. Teachers should bear in mind, however, that success only comes through diligence in planning and inspiring. Therefore remember:

1. Each lesson should be carefully prepared by the teacher.
2. There should be at least two lessons each week. If possible give a lesson each day.

3. Most attention should be given to life—to living things.
4. Each individual pupil should be led to make his own observations.
5. Each object studied should lead to comparison and to generalization.
6. Each object should be observed in its relation to the rest of Nature, as evidence of some great Cause or Planner.
7. Each object should be observed in its utility relation to man, as a part of man's home.
8. The results of observation should be manifested in some form. The work naturally leads to physical exercise, modelling, drawing, designing and writing (composition). It thus becomes the basis for other work, and leads to the co-ordination of all subjects about man, the highest product of Nature.
9. Literature about nature is not nature, but the study of *nature literature* is the best substitute for it.
10. The work in the lower grades should emphasize help and protection; the work of the higher grades should emphasize relation, system and order, leading to design and purpose.

FIRST YEAR.

GROUP I.—FIRST AND SECOND YEARS.

"In the work in nature study only so much should be attempted as can be well done.

"The course in science furnishes an excellent basis for written work.

"Simple object lessons, if possible, with the object under the eye and in the hand of the pupil; conversational lessons on familiar things, and on the phenomena of nature, designed to lead him to give attention, to observe, to compare, to question, to remember. Familiar talks on the human body and the care of it; on common animals known to the child, their distinguishing characteristics and habits; on common flowers and plants, especially food plants and plants of use in the arts, as corn, cotton, etc.; on stones and metals in common use which the

child can learn to recognize. As early as possible he should have some care of plants in the school house or the school garden.

"Correlations, especially with language and drawing, with geoggraphy and literature, should be kept in mind.

"In nature study the development of appreciation of and love for the beautiful should be made prominent."

REPORT OF THE COMMITTEE OF TWELVE.

SEPTEMBER AND OCTOBER.

Autumn Fruits.—Peach, pear, prune, apple, grape, melon, etc., as types of the sphere and its modifications, correlated with drawing.

Griel's "Glimpses of Nature," pp. 1, 3, 5, 27, 31, 83, and 93.
"The Peach Tree" (Bass's "Plant Life," pp. 38–43).

Autumn Leaves.—Begin a collection, and study the forms, colors, and parts.

"From September to June," pp. 24–27.
Beecher's "The Anxious Leaf" (McMurry's Classics, p. 17).

Autumn Flowers.—The sun-flower, golden-rod, and aster.

"From September to June," pp. 24–27.
"Golden-rod and Aster" (Cooke's "Nature Myths," p. 17).
Pratt's "Fairyland of Flowers," p. 218.
Needham's "Outdoor Studies," pp. 29–43.
Tell the story of "Clytie." See
Burt's "Stories from Plato," p. 123.
"Stories of Old Greece," p. 17.
Wilson's "Nature Reader" (Myths), pp. 19–21.
Judd's "Classic Myths," p. 91.

Autumn Seeds.—Forms. How scattered by winds, water, and animals.

Bass's "Plant Life," p. 90.
"From September to June," p. 14.
"Cat Tails and Other Tales," p. 76.
Bergen's "Glimpses at the Plant World," pp. 133-156.

Birds.—Migration.

"From September to June." p. 28.
"My Saturday Bird Class," pp. 99–107.
"The Cranes of Ibycus," from Burt's "Stories from Plato," p. 208.

Animals.—Change of covering caused by winter. How they prepare winter food.

Insects.—Elementary facts about the caterpillar and the butterfly, the grasshopper and the spider.

"The Cocoon" (Bass's "Animal Life," p. 108).
Wilson's "Nature Reader" (Myths), p. 28.
Wilson's "Nature Study, First Reader," pp. 19—21.
"Arachne" (Cooke's "Nature Myths," p. 16).
Kupfer's "Stories of Long Ago," p. 46.
Firth's "Stories of Old Greece," p. 63,
Needham's "Outdoor Studies," pp. 73—77.
Judd's "Classic Myths," p. 114,
"From September to June," p. 12.
Aesop's Fable of the Ant and the Grasshopper.
Is a spider an insect?

Physiology.—Parts of the body compared with like parts of birds and other animals. Beauty of strength and health. Sympathy for sickness and deformity. "The strong should bear the burdens of the weak." Encourage clean hands, face, and nails, and well kept hair.

Geography.—Clouds, rain, dew, frost, direction of wind, change of temperature. Make a record of the weather of each day. Note the change of the sun's shadow, and the hour of the rising and setting of the sun.

The story of Phæton (Judd's "Classic Myths," p. 29.)
"Stories of Old Greece," p. 22.
Stories of the Moon, (Wilson's "Nature Reader, Myths," pp. 54–68).
The story of Diana (Judd's "Classic Myths," p. 34.)

NOVEMBER AND DECEMBER.

Plant Life.—Preparation for winter by bulbs, scales, roots, and falling leaves. Continue the collection of leaves as before. Study the Christmas tree.

"From September to June," p. 63.
Bass's "Plant Life," p. 133.
"Baby Bud's Winter Clothes"—Poullson's "Child World."
"The Fir Tree" (McMurry's Classics, p. 37.)
"The Discontented Pine Tree" (Pratt's "Fairyland of Flowers," pp. 20 and 45).

Cultivate house plants in the school-room.

Animal Life.—Discuss the hibernation and migration of animals and birds.

"The Stork," by Andersen.
"The Broken Wing" (Emerson's Indian Myths).
"Hibernation of Bears" ("Readings from Nature's Book," p. 155).
"From September to June," pp. 36—46.

If possible, use a glass can or jar for a miniature aquarium, and note the development of tadpoles. Use Johonnot's "Cats and Dogs" to study the cat.

Teach the change of clothing caused by change in seasons. Compare with the habits of animals. Discuss the inconveniences and sufferings of the poor in winter. (Read "The little Match Girl.")

Discuss temperance in eating and drinking.

Geography.—Same as before. The phases of the moon. Use of the thermometer. The North Star and the two "dippers."

"The North Wind" (Hiawatha Primer, p. 131).
"The Snow Flake" (Bass's Plant Life, p. 93).
Story of Callisto.
Kupfer's "Stories of Long Ago," p. 16.
Judd's "Classic Myths," p. 46.
Wilson's "Nature Study Reader" (Myths), p. 85.

Compare the length of days in September and December.

JANUARY, FEBRUARY, AND MARCH.

Plant Life.—Plant beans, peas, corn, wheat, or other familiar seeds, in boxes of soil kept in the school-room. Develop the use of light, heat and moisture in plant growth. Note each change in the growth of root and stem.

Newell's "From Seed to Leaf," pp. 15—36.

Animal Life.—Food for animals in winter. How the bear sleeps. How the squirrel stores up winter supplies. How some animals freeze and revive in the springtime. Study the domestic animals.

Johonnot's "Cats and Dogs."
"Friends in Feathers and Fur," pp. 104—110.
"Neighbors With Claws and Hoofs," pp. 92—117.
Observe and discuss the familiar winter birds.

"Why the Crow is Black," adapted from Chaucer.
"How Coronis Became a Crow," from Burt's "Stories From Plato," pp. 176—182.

Review previous work in hygiene. Teach proper games and callisthenics for exercise. Need of good air and ventilation; office of the lungs.

Geography.—Weather observations as before. Note the phases of the moon, and the change in the length of days and nights. Show by experiment the relation of heat to evaporation, and the cause of clouds, rain, snow, frost, dew. Does heat have the same effect on solid bodies as on water?

Bass's "Plant Life," pp. 116—130.

APRIL, MAY, AND JUNE.

Plant Life.—Review. Note the changes in plants, the flow of sap, the development of stems, roots, leaves, and flowers. Study the flowers to become familiar with the calyx, corolla, stamens, and pistil. Encourage pupils to bring flowers to the school-room. Study some tree of easy access to the pupils.

"Mondamon," Hiawatha Primer, p. 132; also pp. 66—74.
"Stories Mother Nature Told Her Children," p. 35.
"The Apple Branch," McMurry's Classics, p. 88.
Bass's "Plant Life" and Chase's "Buds, Stems, and Roots," for constant reference.

Animal Life.—Return of the birds. How to treat a bird's nest. See Bulletin No. —. Ithaca Experiment Station, Cornell Agricultural College.

"Hiawatha Primer," pp. 81–88, 128–138.
Study of a Chicken; see "Friends in Feathers and Fur," pp. 11–24.
Bass's "Animal Life," p. 114.
"From September to June," p. 121.
Read about the Frog; see "Friends in Feathers and Fur," p. 124.
"All the Year Round,"—Spring, p. 59.
Judd's "Classic Myths," p. 89.
Cooke's "Nature Myths," p. 24.
Burt's "Stories from Plato," p. 158.

Do birds and other animals change their dress in the spring?

Reappearance of insects, and general facts about bees, flies, ants, mosquitoes, etc.

"From September to June," pp. 125–127, 149–157.
Bass's "Animal Life," pp. 116–127.
"Flyers, Creepers, and Swimmers," pp. 99–107.

Observe marine life. Study the ocean beach and running streams. See

Page's "Heart Culture," Chap. XII.
"Friends and Helpers," p. 141.

Continue talks on proper eating, table manners, care of teeth.

Bass's "Animal Life," pp. 166–172.

Geography.—Review.

Frye's "Brooks and Brook Basins," to p. 27.
Long's "Home Geography," to p. 70.

At the close of the year review the facts learned during the year. See "From September to June," pp. 181–184. Throughout the year refer to Page's "Heart Culture," for lessons on kindness and humane education.

SECOND YEAR.

AUTUMN.

Plant Life.—Begin with Bass's "Plant Life," pp. 138–147. Develop more facts about autumn flowers. Teach simple facts about the common grasses, and how cultivation (education) has developed the wheat, corn and other grains, from the grasses. Industry lessons in tracing the grain of wheat from the soil to the bread on our table. "How many people helped to make our bread?"

Relation between plants and insects, with observations of bees among the flowers. The literature on this subject is abundant, and the teacher will adopt the method best adapted to the child.

The Gall Fly, in "All the Year Round.—Autumn," p. 30.
Bass's "Animal Life," pp. 70–75.

"Leaves from Nature's Story Book," Vol. I, p. 97.
Needham's "Outdoor Studies," pp. 18–26 and 29–43.
"All the Year Round.—Autumn," p. 69.
"Bass's Animal Life," p. 146.
"Glimpses at the Plant World," pp. 93–119.
"Readings from Nature's Book," pp. 46–51.
"Seaside and Wayside, No. 3," pp. 56–66.
Memorize "The Lilac" in "Fairyland of Flowers," p. 168.

Teach the Nature Myths, especially the story of Proserpina and Ceres.

"Fairyland of Flowers," p. 51.
"All the Year Round.—Autumn," p. 47.
Judd's "Classic Myths," p. 117.
Kupfer's "Stories of Long Ago," p. 22.
"Greek Gods, Heroes and Men," p. 48.

Continue the comparison of leaves as in the first year.

Spear's "Leaves and Flowers," to p. 50.

Animal Life.—Butterflies and Moths, continued from first year.

"From September to June," p. 125.
"All the Year Round—Autumn," p. 60.
Bass's "Animal Life," pp. 35, 69 and 101.
"Half Hours in the Tiny World," pp. 1–18.
"Flyers, Creepers, and Swimmers," pp. 90–99.

Continue the observation of, and study about bees. This can be done also in the spring as well as in the autumn.

"Glimpses of Nature," p. 64.
"From September to June," p. 38.
"Seaside and Wayside No. 1," pp. 35–51.
"All the Year Round—Autumn," pp. 64–70.
Bass's "Animal Life," pp. 38–42.
Needham's "Outdoor Studies," pp. 7–10.
"Lessons in Natural History," pp. 46–50.
"Flyers, Creepers and Swimmers," 103–105.
"Half Hours in the Tiny World," pp. 49–81.

Study the woodpecker as a type of bird life.

"All the Year Round—Spring," pp. 70–75.
Murche's "Science Reader," Book III, p. 49.
Kelly's "Short Stories of Our Shy Neighbors," pp. 187, 189, 192 and 196.

Wilson's "Nature Study Manual," p. 147.
Wilson's "Nature Reader," (First) p. 110.
"My Saturday Bird Class," p. 31.
"The Bird World," p. 40.
"Neighbors with Wings and Fins," p. 127.
"Animal Memoirs No. 2," pp. 201–222.

Test the sight of all pupils, and seat them to the best advantage. Teach the parts of the eye and ear, and simple rules for their proper care. Compare with the sight and hearing of birds and other animals. Awaken sympathy for the unfortunate deaf and blind. Emphasize the work of the first year in cleanliness, pure air, proper eating and care of the teeth.

Geography.—Develop the plan of the schoolroom, the school grounds, a lot and block, a county, and a state. Use "The World and Its People," to page 79. Teach typical regions of the earth, basing the work on "The Seven Little Sisters," securing interest by comparison with conditions of our own times. See the History course for suggestions on the value of a well told story.

Outline—"The Little Brown Baby."

1. Read the story.
2. Compare the climate with our own.
3. Discuss the people.
   - *a.* Color.
   - *b.* Home life.
   - *c.* Dress.
   - *d.* Food.
   - *e.* Occupations.
4. Plant life.
5. Animal life.

In like manner study "Agoonack." See "All the Year Round—Autumn," pages 57–70.

WINTER.

Plant Life.—Some roots, bulbs, and underground buds.

"Buds, Roots and Stems," pp. 62, 73–77, 80–92.
"Everything Sleeps," in "September to June," pp. 45–51.
"A Turnip," in "Plant Life," p. 103.

"From Seed to Leaf," pp. 41–51.
"Fairyland of Flowers," pp. 98–100. Memorize "Said Tulip, 'That is So'," p. 97.

Animal Life.—Talk about domestic animals.

"From September to June," pp. 34–44.
"Cats and Dogs," pp. 57–96.

Study the crow as the type of bird life.

"Introduction to Nature's Story Book," p. 137.
Wilson's "Nature Study Manual," p. 144.
"Seaside and Wayside No. 3," pp. 217–220.
"Wings and Fins," p. 156.
"Bird World," p. 101.
Needham's "Outdoor Studies," pp. 47–50.
"Animal Memoirs, part 2," p. 300.
"Stories of Bird Land, Vol. 2," p. 55.
Beard's "Birds of North America" (manual), p. 21.

During the winter months give regular instruction on food, drink, digestion, the blood, the bones, the nerves, the brain, the skin, the special senses, etc. Use for a guide any good primary text. Baldwin's "Primary Lessons in Human Physiology," published by the Werner School Book Company, is an excellent book for the teacher's desk. Make a comparative study of each subject as much as possible.

Geography and Physics.—Teach according to the previous outline the story of "Gemila the Child of the Desert," "The Little Mountain Maiden," and "The Story of Pense."

"All the Year Round—Winter," pp. 71–80.
"The World and Its People, Book I," pp. 144–152.

Teach by experiment the meaning of matter, molecule, solids, liquids, gases, substances, etc., as given in Smith's "Easy Experiments in Physics," pp. 1–20. This book is essential for the teacher's desk, unless the teacher is skilled in adapting more advanced texts to primary grades.

SPRING.

Plant Life.—Teach the twining plants, and continue to observe leaves and flowers. Study the hop plant as a local product.

"Bass's "Plant Life," pp. 72—54.
"Buds, Roots and Stems," p. 118.

"Glimpses of Nature," pp. 43, 45, 53, 56, and 58.
"From September to June," pp. 101—184.
"All the Year Round—Spring."

Animal Life.—Make a special study of the ant, as an insect type.

Bass's "Animal Life," pp. 116—122.
"Lessons in Natural History," Vol. III, pp. 51—52.
"Seaside and Wayside No. 2," pp. 1—35.
"Half Hours in the Tiny World," pp. 177—218.

Study the earth worm as a type of lower life.

"Glimpses of Nature," p. 84.
"From September to June," pp. 112—114.
"Leaves From Nature's Story Book," p. 90.
"Lessons in Natural History," Vol. III, pp. 21—35.
"Seaside and Wayside No. 2," pp. 35—51.
Wilson's "Nature Study Manual," pp. 184—186.

Study the robin as a type of bird life.

"Glimpses of Nature," p. 67.
"Friends in Feathers and Fur," p. 51.
Bass's "Animal Life," p. 114.
Wilson's "Nature Study Manual," p. 146.
"Our Feathered Friends," pp. 107—116.
"Stories of Bird Land," Vol II, pp. 27—33.
"My Saturday Bird Class," pp. 1—9.
"The Bird World," pp. 7—10.
"Animal Memoirs, Part 2," pp. 78—130.
"Wings and Fins," p. 201.
Page's "Heart Culture," Chap. VIII.

Geography and Physics.—From "Seven Little Sisters" study as per previous outline "The Little Dark Girl" and "Louise." Also study the American Indian as a type of human life.

"The World and Its People," Book I, pp. 116-133.
"The Hiawatha Primer" (H. M. Co.).
"The Story of Hiawatha" (Ed. Pub. Co.).
"Legends of the Red Children" (Werner Co.)
"Docas" (D. C. H. & Co.)
"Indians and Pioneers" (Morse Co.)

Teach by experiment the general properties of matter, impenetrability, divisibility, porosity, compressibility, density, expansibility; also physical and chemical changes in matter.

Smith's "Easy Experiments in Physics," to page 28.
Rick's "Object Lessons and How to Teach Them,' 2 vols.
Rick's "Natural History Object Lessons."

THIRD YEAR.

GROUP II. THIRD AND FOURTH YEARS.

"A graduated course of nature study following a systematic order of development, but observing the child's standpoint as determined by his experience and interests, studying things, phenomena, processes, properties and classification of things, as animal, mineral, and vegetable. Conversational lessons on the human body, its principal parts, their movements and their uses; on common animals so conducted as to arouse interest in bird life, especially treating of the uses of birds to the farmer, and the necessity for their protection, to stimulate observation regarding their habits, and to cultivate a sentiment of kindness in the treatment of them; on plants and the care of them, their parts, as roots, stems, flowers, fruits, seeds, and their growth; on some common minerals and their uses. Lessons on transformation of material in manufactured articles of common use."

REPORT OF THE COMMITTEE OF TWELVE.

Animal and Plant Life.—The teacher will use McMurry's "Special Method in Science," selecting from the outline on pages 223–252 such material as may be suitable to the locality. Read Page's "Heart Culture" for ethical lessons. Use any primary book on hygiene as a guide for oral instruction. Kelley's "Health Chats for Young Readers" is an excellent book for supplementary reading in this grade.

Geography.—"The World and Its People," Book III, is an excellent supplementary book, and should be on the teacher's desk as a guide for the work of the grade. It should be studied in connection with wall maps, and emphasis should be given to the State of Washington and to the county in which the pupil lives.

Physics.—Experiments illustrating the properties of bodies depending on cohesion; hardness, tenacity, brittleness, flexibility, elasticity, malleability, ductility.

Experiments illustrating adhesion, capillary attraction, crystallization, magnetism. Use Smith's "Easy Experiments" to page 70, omitting pp. 54–60 for a more advanced grade.

FOURTH YEAR.

Animal and Plant Life.—The teacher will use McMurry's "Special Method in Science," selecting from the outline on pp. 253–267 suitable material. Use Long's "Ways of Wood Folk" for supplementary reading.

Same work in hygiene as in third grade.

Physics.—Experiments illustrating heat, solar heat, animal heat, heat caused by friction, chemical action, expansion of bodies by heat, melting, evaporation, condensation, freezing, conduction, convection, drafts of air, latent heat, radiation. Use Smith's "Easy Experiments" to page 100.

FIFTH YEAR.

GROUP III. FIFTH AND SIXTH YEARS.

"Preceding course so expanded and taught as to give clearly some of the more important notions of natual science; the human body and the principal functions of life; distinguishing characteristics of animals taught from the study of types; useful and noxious animals, especially birds and insects; the study in typical specimens, of the principal organs of the plant; plant growth, its order and conditions; some typical trees and their characteristics, value and uses of their wood; fruit trees best adapted to the region; lessons on soils.

"Every rural school should have a plot of ground prepared as a school garden, in which every pupil may cultivate and study plants. In this case the instruction in groups III and IV would be extended to include the preparation of soils for cultivation, the action of fertilizers, the simpler agricultural operations, and the use of garden tools."

REPORT OF THE COMMITTEE OF TWELVE.

The first regular text in nature and science is introduced in the fifth year. Effort is made to shorten the work given to geography by requiring a one-book text only in the fifth and sixth grades. If any district desires to take a higher book in

the seventh and eighth grades, it can do so by using any book desired. In support of shortening the work in geography the following extract is given:

"Geography is the great obstacle of today in the way of placing the study of nature on a sound pedagogic basis. It is an amorphous relic of pre-scientific days in education, the text book maker's pet and the true pedagog's abomination. If we could reduce it to a fourth or a tenth of its present time and dimensions, and substitute the rudiments of the leading sciences of which it is a kind of hash, resembling life only as an unlinked sausage resembles an organic and living snake, the efficiency of our entire school system would be greatly enhanced.

"I would by no means advocate the entire abolition of geography from the school courses, but I would not only greatly reduce the text books and time, but put the work much later, and teach most of the matter now included in it in the high school, in proper scientific connection,—part of it with history, part with astronomy, part with geology, part with natural history, etc.,—the elements of all these to be thus made room for at the expense of their common enemy. This in a way would respect and not actually injure the unity of the child's mind. I do not expect these changes to be sudden. The methods and text books of teaching nature which I would substitute are not yet sufficiently perfected, but we do now know, from the study of the child's mind and the order of development of both its interests and its powers, that all these are disregarded and sometimes outraged by the modern American school geographies.—G. STANLEY HALL.

Geography.—The text, **The New Pacific Geography.**

Hygiene.—Outlines as before, using any elementary book for a guide. See teacher's edition of adopted text.

Animal Life.—Review with lower grades the previous work, or read "Ways of Wood Folk," or "Robinson Crusoe," developing all references to plant and animal life and geography.

Physics.—Experiments illustrating the cause of sound, transmission of vibration, loudness of tones, pitch of tones, effect of changing the size of strings, effect of the tension of vibrating strings, vibrating air columns. Also experiments illustrating the source of light, the ray and beam, the umbra and penumbra; transparent, translucent and opaque bodies; inverted images through a small opening; reflecting of light. Use Smith's Easy Experiments to page 134.

SIXTH YEAR.

Geography.—The text, **The New Pacific Geography,** completed.

Hygiene.—Same as in fifth year.

Animal and Plant Life.—Use Rick's "Natural History Object Lessons" to supplement the Geography.

Physics.—Experiments illustrating refraction, images with convex lenses, a simple microscope, the solar spectrum. Also experiments illustrating gravity, center of gravity, stable and unstable equilibrium, the pendulum. Use Smith's "Easy Experiments," to page 160.

SEVENTH YEAR.

GROUP IV, SEVENTH AND EIGHTH YEARS.

Revision and extension of the course in Group III, giving more of completeness and of scientific arrangement and form to the instruction. Cabinets should be collected for the schools.

Physiology.—General review by use of a text book, giving special attention to hygiene and to the effects of stimulants and narcotics. Sanitation of school and home.

Zoology.—Observation of the habits of animals throughout the year; study of available types; general classifications; geographical distribution.

Botany.—Essential parts of the plants; order and conditions of growth; principal groups; geographical distribution of plants; uses of plants; study of trees.

Mineralogy.—General treatment of the structure of the crust of the earth; soils, rocks, fossils, with illustrations from the neighborhood.

Excursions and collections by the pupil.

Physics and Chemistry.—The elementary facts and principles of these sciences should be taught by simple experiments. The course will vary according to the qualifications of the teacher and the means of instruction. Various courses for this instruction have been prepared, giving methods in detail.

Only such selections from the above as can be well done.

REPORT OF THE COMMITTEE OF TWELVE.

Physiology.—The adopted text, **Graded Lessons in Hygiene.**

Animal and Plant Life.—Work in English composition, by outlining and describing the work of the previous grades.

Physics.—Experiments illustrating pressure of liquids, "water seeks its level," pressure of air, the pump, the siphon, potential and kinetic energy, inertia, friction. Also experiments illustrating the action of two forces acting together, two parallel forces, the three classes of levers, forces acting at an angle. Use Smith's "Easy Experiments," pages 172–196.

EIGHTH YEAR.

There is no required science for the eighth year. One of the following is recommended, at the option of the district:

Shaler's "First Book in Geology;" D. C. Heath & Co.
Bert's "Primer of Scientific Knowledge;" J. B. Lippincott & Co.
James' "Practical Agriculture;" D. Appleton & Co.
Bailey's "First Lessons with Plants;" The Macmillan Co.
Avery and Sinnott's "First Lessons in Physical Science;" Butler, Sheldon & Co.
Review Geography.

Physics.—Experiments illustrating simple measurements by the common and metric scales, relation of circumference to diameter, diameter of a sphere, volume of a cylinder. Use Smith's "Easy Experiments," from p. 196 to the end. Also voltaic electricity, pp. 54–60; and specific gravity, pp. 162–170.

HISTORY AND CIVICS.

"History is humanity becoming and being conscious of itself. * * * History is humanity's knowledge of itself, its certainty about itself. It is not 'the light and the truth,' but a search therefor, a sermon thereon, a consecration thereto. It is like John the Baptist, 'not that Light, but sent to bear witness of that Light.'" DROYSEN.

The theory on which this course in history is based differs from that followed by most schools. It has been the custom to teach the facts about our own country and people to the primary

and grammar grades, and leave the subject of general history to high school instruction. This course, however, is based on Herbert Spencer's idea: "There can be no correct idea of a part without the corresponding idea of the correlative whole." Hence the grade work in history consists in teaching something of the history of the race, leading up to and including the history of our own people. If the pupil is led to see the order and UNITY of all history, the history of the United States can be interpreted with more profit, and a better citizenship will result.

Progress is the underlying principle of history; more particularly, mental and spiritual progress. With each change of environment old ideas give way, institutions crumble, and from the ruins grow new creations.

"And the thoughts of men are widening with the process of the suns." TENNYSON.

"New occasions teach new duties; time makes ancient good uncouth;
They must upward still and onward, who would keep abreast of Truth;
Lo! before us gleam our camp-fires, we ourselves must pilgrims be,
Launch our Mayflower, and steer boldly through the desperate winter sea,
Nor attempt the Future's portal with the Past's blood-rusted key." LOWELL.

In the study of history by young pupils, the logical relations must give way to the psychological conditions. The child cannot grasp the logic of history, but he can feel the motives of men in making history, if their acts are put before him in such manner as will enable him to compare them with his own acts.

The purposes of history in a school course are: (1) To provide material out of which the imagination may construct historical pictures; (2) To cultivate the habit of careful observation in the search for truth; (3) To cultivate the habit of judging the thought and feeling of men through their actions; (4) To give a closer knowledge of the origin and nature of present conditions and institutions.

No other subject so touches both the head and heart of mankind. The ethical impulse should be the basis of all instruc-

tion in all grades. It is the goodness of mankind that has evolved the good of civilization, and the child should be taught to appreciate the nobility of those whose acts constitute the history of the race and have determined the progress of ideas.

A child's imagination is vivid, and the history work should be in harmony with this psychological condition. The STORY should be made the basis for the cultivation of the imagination.

The *myth* should be read because it is in harmony with the child's mental development, and likewise represents the child-period of the race.

After the myth should follow the *traditions* of a people, representing the transition from the purely imaginary stage of history to the stage of realities, modified by their touch with the generations through which they pass.

Then should follow *real heroes* or fictitious ones, around whom cluster the great actions which determine social conditions and constitute real history.

At all times touch the subject from the child's point of view, and appeal to child-impulses and experiences.

Emphasize the fact that in all ages the same emotions and passions actuate man; that strength is ever encroaching upon weakness, that tyranny is ever trying to limit human liberties.

THE STORY, IN HISTORY AND LITERATURE.

"Of all things that a teacher should know how to do, the most important, without any exception, is to be able to tell a story."—

G. STANLEY HALL.

"At the heart of the great dramas of the world, lies the story as the nucleus of interest. It is the story that delights, that thrills, that awes, that gives impetus to the philosophic thought that they have inspired."—HAMILTON WRIGHT MABIE.

I. WHAT IS IT?—It is a picture, a word picture that helps us to see more clearly, to feel more heartily, and to act more faithfully.

QUALITIES OF A GOOD STORY.—

1. It should be interesting and dramatic.
2. It should be instructive and significant.

3. It should be simple and in concise language.
4. It should be complete, a logical unity.
5. It should cultivate a taste for good literature.
6. It should lead to the formation of moral judgments.
7. It should be related to the daily school work.
8. It should embody an ideal.

Stories should always embody ideals—ideals of courage, strength, wisdom, patience, generosity, unselfishness, kindness. Children imitate what they admire, thus an ideal becomes an unconscious influence upon character. "Ideals are the end as well as the center and source of our living—all the other powers are but means by which we seek to realize our *ideals* in our lives."

III. KINDS OF STORIES.—

1. Imaginative—to cultivate the æsthetic emotions.
2. Realistic—to teach a moral and to inspire imitation.
3. Historic—to discover individual relations to society.
4. Scientific—to form habits of observation and to convey information.

Through the historic tale the child discovers how environment influences work and habits, and how environment may be overcome. He also discovers relation between the individual and society, the growth of the state and the changes therein whereby it has become the institution of a free people.

IV. TREATMENT OF THE STORY.—

1. Preparation.—Prepare the child's mind for the thought to be presented, by skillful questioning, and thus bring to the child's consciousness the concepts which are related to those about to be presented.

2. Presentation.—Give the story complete. If it is a long one, give it in sections, each section forming a complete whole in itself. Develop it in all relations, and require the pupil to reproduce it. In the reproduction of stories, do not interfere with the continuity of thought by correcting faults in language and pronunciation, but leave that until the close of the narrative.

3. Abstraction.—Lead the child to reach the general conclusions which are important and significant to his life, by (a) developing clearly the new concepts, (b) by co-ordinating and associating them with his old concepts, and (c) by deriving the general notion underlying the story.

4. After the general truth is abstracted, it should be expressed in good English. It should also be related to the pupil's daily living, in the most direct manner. Let the story point its own moral.

V. To the teacher.—

1. Know the story. Read many books for the fullest possible information. You must see all that there is in it if you are to lead the pupil to see it.

2. Feel the story. You must first be touched by the story before you can touch your pupils with it.

Dr. Walter L. Hervey, in his "Picture Work," says: "The secret of story-telling lies not in following rules, not in analyzing processes, not even in imitating good models, though these are all necessary, but first of all in being FULL—full of the story, the picture, the children; and then in being morally and spiritually up to concert pitch, which is the true source of power in everything. From these comes spontaneity; what is within must come out; the story tells itself, and of your fullness the children all receive."

3. Shorten it by cutting out details which do not intensify the picture. Brevity is the soul of story-telling.

4. Expand it by giving a background of such details as are necessary for a clear conception.

5. Repeat it, and have pupils repeat it. A good story is always worth re-telling.

FIRST AND SECOND YEAR HISTORY.

About the only historic impulse that can be given children in the beginning grades is such as arise in connection with the various holidays and anniversaries through the year. These exercises should be given by all grades.

Books For the Teacher's Desk.

ESSENTIAL.—

History Reader for Elementary Schools, by Mrs. L. L. W. Wilson.
Teacher's Manual (to accompany the Reader), by Mrs. L. L. W. Wilson.
Santa Rosa Story of Washington.

HELPFUL.—

"American History Stories," 4 vols.
"Pilgrims and Puritans."
"From Colony to Commonwealth."
Any good texts on United States History.
Teachers' Journals giving special programs.
"The Rescue of Cuba."
"Stories of Other Lands" to p. 50.

SEPTEMBER AND OCTOBER.

COLUMBUS.—It is clear that these months can be used to emphasize the events related to the discovery of America. The time up to October 12 should be devoted to Columbus, and the rest of the time can be given to the Norsemen and the Cabots and other explorers.

NOVEMBER.

THANKSGIVING AND THE PILGRIMS.—The troubles of the Pilgrims, their worship, dress, wanderings, and landing at Plymouth Rock.

Read Mrs. Hemans' "Landing of the Pilgrims."

Teach the facts about the first Thanksgiving.

On the day before Thanksgiving a program should be rendered, the boards decorated, visitors invited, and a day of gratitude be spent with the greatest liberties consistent with propriety.

If situated to make it possible, children should be encouraged to bring contributions to the school for proper distribution to the needy.

DECEMBER.

JOHN SMITH AND THE VIRGINIA COLONY.—Since the London Company sent the first settlers to Virginia from London, December 19, 1606, the work of the month clusters around

Virginia and John Smith, and collateral with this may be taught the story of Henry Hudson, of William Penn, and other leaders in colonial times.

Emphasize the treatment of the Indians by Penn to illustrate the power of kindness and justice.

JANUARY.

BENJAMIN FRANKLIN.—Franklin was born January 17. During this month pupils should learn facts about his early life, and some of the short sayings from his writings.

FEBRUARY.

FEBRUARY 12 AND 22.—The teacher needs no suggestion for the work of this month.

MARCH.

THE BOSTON MASSACRE, MARCH 5.—The story of the troubles which led to the Revolution. Prepare for the work of the next month.

APRIL.

THE BATTLE OF LEXINGTON.—Continue the story of the Revolution to the end, touching with emphasis the stories of Bunker Hill, the Declaration of Independence, capture of the Hessians, Valley Forge, Benedict Arnold, surrender of Cornwallis. Give a program on the 19th of the month.

MAY.

MAY 30, DECORATION DAY.—As a preparation for this day, the month should be devoted to the study of Grant and the Civil war, with such stories as will teach the ideas of freedom, bravery and loyalty. The first of the month, as a variation, may be given to the story of Dewey's victory at Manila.

JUNE.

A FLAG DAY PROGRAM.—A study of National flags. The story of Betsy Ross, and the Star-Spangled Banner. The flag salute and the national airs. Or,

THE MERRIMAC IN SANTIAGO HARBOR, JUNE 3.—Lieutenant Hobson and his companions sank the Merrimac in the channel to prevent the escape of Cervera's fleet. The month may be devoted to the events of the Spanish war.

THIRD YEAR.

Books for the Teacher's Desk.

ESSENTIAL.—Same as for First Year.

Scott's "Organic Education" (Vol. XXXV. of Heath's Ped. Library).

"Ten Boys Who Lived from Long Ago to Now."

"The Story of the Chosen People."

HELPFUL.—Same as before.

Kemp's "Outline of Method in History."

"Stories of the Olden Time," pp. 71–116.

Stories of Crœsus, Cyrus, Babylon, the Jewish Captivity.

"Old Stories of the East."

Any good text on General History.

The year is given to the study of the pastoral period of the race, as shown by the Aryan and Persian. Ample opportunity is given to develop

Ideas of property rights.
Sense of danger and caution.
Benefits of Co-operation.
Individuality of character.
Sense of mastery.
Ideas of military life.

KABLU, THE ARYAN BOY.

Read and explain the complete story, and review orally by developing the following outline:

1. The ideas of "A long, long time ago," and "A long, long way off."
2. Description of a mountain.
3. How the house was built.
4. Morning worship—prayer to the Sun.
   a. Is the sun very important to the comfort of man?
   b. Should we be thankful for all things given to us?
   c. Do people still worship the Sun?
   d. Is it our duty to express our thanks for the blessings we enjoy?
5. Occupation of each member of the family.

a. In the house.
b. In the fields.
c. Relation of occupation to environment.

6. Implements and tools.
   a. Plows, knives, etc.
   b. Use of metals.
   c. Mill for grinding grain.
   d. Earthenware and work in clay.

7. The storm.
   a. The evening prayer.
   b. The thunder and lightning; cause and effect.
   c. The swollen mountain stream; cause and effect.
   d. The home destroyed.

8. The home re-built.
   a. Who built it?
   b. Of what material is it built?
   c. How came the stone to be used?
   d. Compare with homes of to-day.
   e. How was the roof made?

9. The change in the seasons.
   a. Length of summers and winters.
   b. Famine and its effects.
   c. Migration to the plains.
   d. Reasons for and against the migration.
   e. Relation of climate to occupation.
   f. Plant and animal life.
   g. The savage inhabitants.
   h. A thinking people rules an ignorant people.
   i. Is slavery right.

10. Emphasize the following thoughts:
   a. Each one at home has something to do.
   b. We should pray to our God, "Gladden our hearts to do Thy will."
   c. "The brothers will come and work for the one who is in need."
   d. "Man means one who thinks."

e. "Man, the thinker, can bring good out of disaster, wisdom out of misfortune, because he can think."

f. "It took the thought of many men to learn how to bring wisdom out of misfortune." (Beginning of social life and government).

11. Drill pupils in illustrating the story by original drawings of the home, the jars, the swollen stream, the rising sun, the plow, etc.

DARIUS, THE PERSIAN BOY.

Read and explain the complete story, and review by developing the following outline:

1. Relation of Darius to Kablu.
   a. Migration of the mountain people westward.
   b. Parting at the Black Sea.
   c. Arrival of the family of Darius.
   d. The religion of the Medes and Persians.
2. The education of the Persian boy.
   a. Early rising, and hastening to the open field.
   b. The dress and equipment of each boy.
   c. The subjects taught.
      The sling and bow.
      Use of iron.
      Horsemanship.
      Moral instruction.
   d. Daily meals, and self support.
   e. Crossing the river.
3. Zadok, the Hebrew boy.
   a. The story of the salt sea, and its commerce.
   b. Captivity of the Jews in Babylon.
4. Darius on the farm.
   a. Rural occupations.
   b. Lesson from the Zendavesta.
   c. The locusts.
5. Return to Babylon.
   a. Location.
   b. Walls.
   c. Euphrates.

d. Temple of Belus.
e. Hanging Gardens.
f. Palaces and bridges.

6. Religion.
   a. Ormuzd and Jehovah.
   b. Religious festival of the New Year.
   c. The freedom of the Jews.
7. Drill on the following thoughts:
   a. "Do not let us forget the traditions of our Fathers."
   b. "Do you also serve the Father of Light and Life?"
   c. "There are two spirits, the good and the base. Be good, not base. The good is holy, true, to be honored through truth, through holy deeds. *You cannot serve both.*
   d. "And he promised to bring us again out of our captivity."
   e. "One of man's chief duties is to till the soil which the Father of Life and Light has given to him, and to plant trees, that the fruitful earth may blossom and be glad."
   f. "Purity and glory will grow and bloom forever for those who are pure and upright in their own hearts."
   g. "TRUTH, COURAGE and OBEDIENCE."
8. Drill in illustrative drawings as before.

FOURTH YEAR.

Books for the Teacher's Desk.

ESSENTIAL—Same as for third year.
"Greek Gods, Heroes and Men."
"The Story of the Greeks."

HELPFUL—
"Old Greek Stories."
"The Story of Troy."
Firth's "Stories of Old Greece."

Kupfer's "Stories of Long Ago."
Judd's "Classic Myths."
Any books on mythology.
Any good text on Grecian History.
"Ten Great Events in History," to p. 23.
"Stories of the Olden Time," to p. 20.

The whole year is to be given to the study of Greek history and mythology. Following the story of Cleon, some of the Grecian myths should be retold and others read, and where possible, interpreted to show their relations to physical conditions and environments of Greece.

Any Greek history or mythology will be helpful, but perhaps the best books for the teacher's desk is one published by Scott, Foresman & Co. of Chicago, entitled "Greek Gods, Heroes and Men." This book is comprehensive for the purpose desired and delightfully interesting.

Keep in view in all exercises
The cultivation of a healthful imagination.
Development of ethical perceptions.
The influence of environment.
The dignity of body and mind.
The emphasis of ideals.

Supplement "The Wanderings of Odysseus" by an account of the voyage of Æneas, thus preparing for the next story about Horatius.

Teach the story of Damon and Pythias in "Stories of the Olden Time," p. 36.

CLEON, THE GREEK BOY.

1. The valley where the Olympic games are held.
   a. On the march to the valley.
   b. From whence they come.
2. The child and his pedagogue.
   a. Meaning of "pedagogue."
   b. Price of an intelligent slave. Is intelligence always valuable?
   c. School days and school hours.
   d. Method of teaching writing.

e. How Atticus learned his letters.
f. Cleon's inclination to oratory, and how he learned Homer.
g. His games.

3. The Olympic races.
   a. Cleon starts for the races.
   b. His dress, and the dress of the horseman.
   c. How time was counted.
   d. The noon-day meal.
   e. The laurel staff.
   f. Aristodemus, the Spartan boy.
   g. The victorious race.
   h. The wrestling contest.
4. Their return home.
   a. The garland on the door.
   b. The wool on the neighbor's door.
   c. Structure of the house.
   d. The sacred hearth.
   e. The golden ear-rings.
5. The Acropolis.
   a. The statue of Pallas-Athena.
   b. The festival and torch race.
   c. Daldion, the orphan, reared and educated by the state.
6. The christening festival of Cleon's baby brother.
   a. Preparation of the food.
   b. The amusements.
   c. The guests, their dress and reception.
   d. How the feast was served.
   e. Cleon's share in the festivities.
   f. He retires to his bed.
7. Drill on the following thoughts:
   a. "We know that no image can represent God, the Father of us all."
   b. "These boys are too poor to pay a teacher, and yet they have a great love of learning, so they are working for the schoolmaster, who will pay them in teaching."

c. "The body must be educated as well as the mind."
d. "Obedience is one of the duties of a good citizen."
e. "He who toils is beloved by God and men."
f. "It was not ear-rings of gold that the oracle meant, but jewels of thought set in golden words."

8. Drill in drawing the plan of the Greek house.

FIFTH YEAR.

Books for the Teacher's Desk.

ESSENTIAL.—Same as before.

Pratt's "Stories of Old Rome."
"The Story of the Romans."

HELPFUL.—Books on mythology as before.

"The Story of Æneas."
"The Story of Cæsar."
Any good text on Roman History.
"Stories of the Olden Time," pp. 117–168.
Shakespeare's "Coriolanus" and "Julius Cæsar."

During the fifth year **Mowry's Primary History of the United States** is required in the hands of the pupils, not as a separate recitation, but to be used alternately with the reader.

The whole year is to be given to the study of Roman history and life. Following the story of Horatius, attention should be given to Roman heroes and decisive events of Roman history. Any Roman history will be helpful, but perhaps the best book for the teacher's desk is published by the Educational Publishing Company, "Stories of Old Rome."

Develop in a general way

Power based on selfishness and cruelty cannot endure,
Decisive character overcomes opposition,
Heroism is closely related to patriotism,
Power through law and order will endure.

HORATIUS, THE ROMAN BOY.

1. A sail in a Trireme.
2. The slave market in Rome.

a. The slaves.
b. The buyers and their costume.
c. Horatius and Horatia. Family names.

3. The Roman house.
4. The household gods.
5. The vestal virgins.
6. The Roman calendar.
7. The shield festival.
8. What Horatius learned at school.
   a. Writing.
   b. Reading and declaiming.
   c. Numbers.
   d. Geographical ideas.
   e. The Twelve Tables of the Law.
9. The mock trial.
10. The vacation festivals.
    a. To the temple of Minerva.
    b. To the temple of Diana.
    c. The sacrifices at night.
    d. To the temple of Apollo.
11. Horatius visits the senate.
    a. The boys play "senate."
    b. They elect a tribune.
    c. They study the veto power.
12. Scipio's arrival from Spain.
    a. The march from Campus Martius to the Temple of Jupiter.
    b. The General's costume.
    c. The crown of oak leaves, etc.
13. Valerius' story of the Temple to Castor and Pollux.
14. Funeral celebrated by public exhibitions.
15. Saturnalia Holidays.
    a. Gifts to the poor.
    b. Gifts from friends.
    c. Gift of freedom.
    d. The "The Game of Troy."

16. The Lupercal feast.
    a. The sacrifice.
    b. The German Gladiators.

Drill on the following thoughts :

1. What is punishment for ? It is to make us better. Now if the man is made really better, let us be thankful that it was by the sight of pure and good, rather than by the stern and dreary imprisonment. There is severity and punishment enough, and more than enough, in Rome. So we will cherish this little glimpse of gentleness and mercy.

2. No Roman ever rises to distinction who is not capable of eloquent pleading.

3. And thus early the boys learn that it is also their duty to advance the grandeur of Rome.

4. "This man I will to be free."

5. It is not a manly nor kindly thing that they should be made to hurt or kill each other as an amusement for the Romans.

SIXTH YEAR.

Books for the Teacher's Desk.

ESSENTIAL.—Same as before.

Dickens' "Child's History of England," or
Blaisdell's "Short Stories from English History."
Scott's "Tales of Chivalry."

HELPFUL.—

"The Story of the English."
"England" (Evolution of Empire Series).
Rannie's "Outline of the English Constitution."
Any good text on English history.
Scott's works based on English history.
Shakespeare's plays based on English history, as "Henry VIII," "King John," etc.

THE ANGLO-SAXON BOY.

1. The race to the eagle tree.
2. The village boundaries.

3. The swine herd.
4. "Grendel."
5. The message of old Elric.
   a. Description and arms.
   b. Derivation of the names of the days of the week.
6. The Saxon home.
   a. The mother's reception.
   b. Grandfather's news.
   c. Equipped for war.
7. The voyage to England.
   a. Description of the fleet.
   b. Hengist's opinion of the Britons.
   c. Reception by Vortigern, the British king.
   d. Wulf's oath of allegiance.
8. The march against the Picts.
   a. Description of the Picts.
   b. The old Roman roads.
   c. Thong castle.
9. The Saxon settlement on the Isle of Thanet.
10. Their learning and lore.
    a. Their education.
    b. The old gleeman's tales.
    c. How they signed their names.
    d. Anglo-Saxon words in the English language.

Continue the year by similar study of Gilbert, The Page; Roger, The English Lad; Ezekiel Fuller, The Puritan Boy; Jonathan Dawson, The Yankee Boy; and Frank Wilson, The Boy of 1885.

11. Drill on the following:
    a. "To be a free man is as good as to be a king."
    b. "A true knight should have his feet steady, his hands diligent, his eyes watchful, and his heart resolute."
    c. "Loyalty, the first and greatest lesson for every Englishman."
    d. The school-room motto—"Either teach, or learn, or leave the place."

e. "Do unto others as you would have others do to you."

f. "Many a simple thing the skillful New Englanders could make for themselves if their mother country would allow them to do so."

g. "He will live to call it Independence Day, and to think of it as the birthday of a great nation."

h. "It is not what a boy has, but what he is, that makes him valuable to the world, and the world valuable to him."

Teachers should lead pupils to develop parliamentary and forensic power through organized societies, either in the regular school exercises, or in debating societies meeting one evening each week for the benefit of the entire district. For information on this subject refer to

Robert's "Rules of Order;" Scott, Foresman & Co.

Reed's "Rules of Order;" Rand, McNally & Co.

Fish's "Guide to the Conduct of Meetings;" Harper & Brothers.

Robert's "Parliamentary Syllabus;" Scott, Foresman & Co.

During the sixth year, the text **Why We Vote,** is required in the hands of the pupils, not as a separate study, but to be used alternately with the reader. Wherever possible, the school should be organized into the various municipal departments of local government for concrete illustration of public business methods.

"In connection with the history, which should be closely connected with the geography, the teacher who keeps her pupils informed upon the "current events" of the day will give them a clearer conception of what the history of the country is. They will get the idea that *we*, as well as the people of the past, are a part of history, and that the history of the future will consist of a record of the deeds of to-day."

MISS SADIE ROGERS,
Principal Training Dept., New Whatcom Normal School.

SEVENTH YEAR.

The seventh and eighth years are devoted to the study of the history of the United States and the fundamental principles underlying good citizenship. Attention will be given to related topics in geography and literature.

Suggestions to Teachers of U. S. History.

1. Study by topics—not by pages.
2. Study related events rather than dates.
3. Express the thought in the best possible original English.
4. Do not memorize, except choice collateral literary selections.
5. Constantly refer to related facts by proper reviews.
6. Briefly explain all alusions to history, science and literature.
7. Dwell on good deeds—the lives of good men.
8. Use topical outlines for composition.
9. Give programs based on noted days in history.
10. Encourage the narration by the pupils of supplemental matter.
11. Develop the biographies of leaders in politics and learning.
12. Study current events and the proper use of newspapers and magazines.
13. Make and use simple outline maps to illustrate and supplement the lesson.

In the seventh grade, study at least to the constitutional period, using the adopted text, **The New Era U. S. History.**

Books for the Teacher's Desk.

ESSENTIAL—

Rice's "Course in History and Literature."
Mace's "Method in History."
Starr's "American Indians."
"Our Country in Prose and Poem."
Carrington's "Columbia Selections."
Kemp's "Outline of Method in History."

EIGHTH YEAR.

Complete the text, and take collateral or alternate with it **Dole's American Citizen.** Emphasize as in previous grade the related facts in geography and literature. Read to the class Chap. III of Dole's "Coming People," Thos. Y. Crowell, & Co., Boston.

Books for the Teacher's Desk.

ESSENTIAL—

Same as for seventh grade.

Taylor's "History of Washington."

For complete lists of books on history, see

Rice's "Course in History and Literature."

Scott's "Organic Education."

Kemp's "Outline of Method in History."

Mace's "Method in History."

ARITHMETIC.

The course in arithmetic is left optional for the first three grades, that the districts may use any particular system or method of primary numbers desirable. For aid in teaching, teachers are referred to

"Psychology of Number;" D. Appleton & Co.

"Prince's Arithmetic by Grades;" Ginn & Co.

"Nichol's Arithmetic by Grades;" Thompson, Brown & Co.

"The Wooster Arithmetic, Grade I;" Crane & Co.

"Speer's Arithmetic for Primary Teachers;" Ginn & Co.

"McLellan and Ames' Primary Arithmetic," Teachers' Edition; The Macmillan Co.

Brooks' "Philosophy of Arithmetic;" The Normal Publishing Co., Lancaster, Pa.

The course by grades is as follows:

FIRST YEAR.—Optional.

SECOND YEAR.—Optional.

THIRD YEAR.—**Walsh's Primary Arithmetic** in the hand of the teacher.

FOURTH YEAR.—**Walsh's Primary Arithmetic** in the hands of the pupils.

FIFTH YEAR.—**Grammar School Arithmetic,** Chapters VI and VII.

SIXTH YEAR.—**Grammar School Arithmetic,** Chapters VIII and IX.

SEVENTH YEAR.—**Grammar School Arithmetic,** Chapters X, XI, and XII.

EIGHTH YEAR.—**Grammar School Arithmetic,** Chapters XIII, XIV, XV, and XVI.

READING.

Reading is more and more considered as a means, not an end. Not only is a child given the mechanical power to read, but it is taught what to read. Good literature is brought to the pupils of all grades. The publishing houses are supplying the schools with the best literature in the form of biography, myth, legend, history, geography, and nature books. The pupils should be drilled on the regular lessons of the text in reading, but in addition they should be led to select other books from the library for home reading, and each school district should provide supplementary books suitable for each grade. These books should be selected with a view of correlation with other subjects, and the reading period will then become one of information as well as oral drill.

For information on methods of teaching reading, the teacher should refer to—

"Bronson's Reading Methods;" D. C. Heath & Co.
"Phonics and Reading;" Public School Publishing Co.
"How to Teach Reading;" Silver Burdett & Co.
"Special Method in Reading;" Public School Publishing Co.
"How to Teach Reading in the Public Schools;" Scott, Foresman & Co.
"Burt's Literary Landmarks;" Houghton, Mifflin & Co.
"Hall's How to Teach Reading;" D. C. Heath, & Co.

Le Row's "How to Teach Reading;" Maynard, Merrill & Co.

Any Treatise on Elocution.

Oral expression cannot be taught apart from thought comprehension. Lead pupils to see clearly and to feel deeply, and they will find that expression is natural and easy. Arouse interest, excite emotion, and expression will be effective. Children love to read *if they have something to read*, but they do not ove to read when they merely *have to read something*. Encourage rhetorical exercises, recitations, debates, and public readings. A literary society on Friday afternoon of each week is one of the very best means of cultivating oral expression. Each grade should commit to memory some choice selections, and practice in articulation, emphasis, quality of voice, inflection, pitch, rate, etc. See list on page 51.

FIRST YEAR.

The adopted text:

Lights to Literature, Book One, Rand, McNally & Co.

Supplementary books recommended:

Rice's "First Year Book,".....The Westland Publishing Co.
Bass's "Beginner's Reader,".....D. C. Heath & Comany.
"The Wooster Primer,".....Crane & Company.
"Home and School Series," Book One,...Eaton & Company.
"Stories from the Poets,".....The Morse Company.
"The Hiawatha Primer,".....Houghton Mifflin & Company.

For all schools using a reading chart for beginners, Wooster's Reading Chart, Crane & Co., is recommended.

See library list for other books.

SECOND YEAR.

The adopted text:

Lights to Literature, Book Two, Rand, McNally & Co.

Supplementary books recommended:

Rice's "Second Year Book,".....The Westland Publishing Co.
The "First Year Nature Reader," .....Werner School Book Co.
"Around the World," Geographical First Book, ...The Morse Company.
"Nature's Byways,".....The Morse Company.
"Stories of Indian Children,".....Public School Publishing Co.

"The Plant Baby and its Friends".....Silver, Burdett & Company.
"Griel's Glimpses of Nature".....D. C. Heath & Company.
See library list for additional books.

THIRD YEAR.

The adopted text:

New Century Reader, Book Three, Rand, McNally & Co.

Supplementary books recommended:

"Ten Boys,".....Ginn & Company.
"Health Chats for Young Readers,".....Educational Publishing Co.
"Seven Little Sisters,".....Ginn & Company.
"Legends of the Red Children,".....Werner School Book Co.
"Old Stories of the East,".....American Book Company.
McMurry's "Classic Stories,".....Public School Publishing Co.
"Lessons in Humane Education," Parts I and II,.....Whitaker & Ray Company.
See library list for additional books.

FOURTH YEAR.

The adopted text:

New Century Reader, Book Four, Rand, McNally & Co.

Supplementary books recommended:

"Lessons in Humane Education," Part III. Whitaker & Ray Company.
Bashford's "Nature Stories of the Northwest,".....Whitaker & Ray Company.
Long's "Ways of Wood Folk".....Ginn & Company.
Guerber's "Story of the Greeks,".....American Book Company.
Baldwin's "Old Greek Stories,".....American Book Company.
Clarke's "Story of Troy,".....American Book Company.
Clarke's "Story of Æneas,".....American Book Company.
Dicken's "Little Nell,".....Educational Publishing Co.
Kupfer's "Stories of Long Ago,".....D. C. Heath & Company.
"Greek Gods, Heroes and Men,".....Scott, Foresman & Company.
Hawthorne's "Tanglewood Tales,".....Maynard, Merrill & Company.
See library list for additional books.

FIFTH YEAR.

The adopted text:

New Century Reader, Book Five, Rand, McNally & Co.

Supplementary books recommended:

"Lessons in Humane Education," Part IV.. Whitaker & Ray Company.

"*Matka, a Story of the Mist Islands"....Whitaker & Ray Company.
"Robinson Crusoe".....Ginn & Company.
Hawthorne's "Wonder Book".....Houghton, Mifflin & Co.
Guerber's "Story of the Romans".....American Book Company.
Guerber's "Story of the Chosen People".American Book Company.
Guerber's "Story of Cæsar".....American Book Company.
"Pioneer History Stories"..... ...Public School Publishing Co.
"Plants and Their Children".....American Book Company.
"Swiss Family Robinson".....Ginn & Company.
See library list for additional books.

SIXTH YEAR.

The adopted text:

New Century Reader, Book Six, Rand, McNally & Co.

Supplementary books recommended:

"Pacific History Stories".....Whitaker & Ray Company.
"Tales of the Philippines".....Whitaker & Ray Company.
Blaisdell's "Short Stories from English History".....Ginn & Company.
Dickens' "Child's History of England"..
Guerber's "Stories of the English".....American Book Company.
"Great American Industries" (2 vols.)...A. Flanagan.
See library list for additional books.

SEVENTH YEAR.

No reader, as such, is adopted for the seventh and eighth years, and the drill in reading will be incidental to other subjects, and to such regular literary and rhetorical exercises as may be provided for the weekly program.

Supplementary books recommended:

Taylor's "History of Washington".....J. M. Taylor, Seattle.
"Franklin's Autobiography".....Maynard & Merrill.
"Evangeline".....A. Flanagan.
Kingsley's "Westward Ho".....University Publishing Co.
Cooper's "Spy".....
"Evolution of Dodd".. ..... Rand, McNally & Company.
See library list for additional books.

EIGHTH YEAR.

Supplementary books recommended:

American Masterpiecs.....Houghton, Mifflin & Co.
Last of the Mohicans..... ..

*This is a most interesting story of the seal life in Alaska, written by Pres. David Starr Jordan.

Select from the library list such books as will supplement the other subjects required in the grade.

SPELLING.

Spelling is taught in all grades and with all subjects. The spelling book is introduced in the fourth grade, and studied through the eighth. The text is divided into parts, and one part is taken each year.

LANGUAGE.

GROUP I.—FIRST AND SECOND YEARS.

a. Conversational lessons on familiar experiences and familiar things. Reproduction of stories told by the teacher; invention of stories suggested by pictures, etc. All this will be training in observation and thinking as well as expression. Great care is necessary as to choice of words and tones of voice.

b. Similar to (a), adding written to oral expression; instruction in correctness of the written forms, as the form of the sentences, the use of capitals and punctuation. Memorizing of choice selections.

REPORT OF THE COMMITTEE OF TWELVE.

GROUP II.—THIRD AND FOURTH YEARS.

a. See (b), Group I. Combination of oral and written work. Seek variety in subjects. Base lessons on nature lessons, readings, etc. Careful attention to form and use of complete sentences in recitation and conversation, to purity of tone, clearness of enunciation, correctness of pronunciation in speaking, to legibility and neatness in writing.

b. Work of previous years continued and expanded; oral narration, invention (from pictures, etc.), description, with written sentences from the same; letter writing, with special attention to the general form of the letter; careful attention to the vocabulary of the child. Memorizing of choice selections.

In much of this work all the group can be taught as one class, but pupils of very unequal advancement should be classed together.

REPORT OF THE COMMITTEE OF TWELVE.

GROUP III.—FIFTH AND SIXTH YEARS.

See Group II. Much written work in connection with and based upon the school work in its various departments. The sentence in its

parts; general classification of work into parts of speech according to their use in the sentence, not teaching definitions nor treating of subdivisions. Careful teaching of the construction of the paragraph. Letter writing, with special reference to correct forms of social and business letters. Readings in literature by teacher and by pupil in school and home. Memorizing of choice selections long enough to have unity in themselves.

Some text book of language lessons must be used in the rural schools, in order that a course of teaching may be carried out eventually.

REPORT OF THE COMMITTEE OF TWELVE.

GROUP IV.—SEVENTH AND EIGHTH YEARS.

a. Letter writing, with special reference to subject matter, to form and expression.

Much writing in connection with school work, and from outlines wrought out by teacher and pupils. Throughout the course careful attention should be paid to the correction and enlargement of the pupil's vocabulary.

b. A course in grammar by rational use of text book. Preparation of plans for themes by the pupils, and writing from them.

c. Readings in literature by pupils in school and home. Memorizing of choice selections long enough to have unity in themselves. All written lessons and examinations should be so planned that they will be lessons in composition as well.

By this course of instruction the pupil should now be able to express his own thoughts clearly, in correct form, and in well chosen words.

REPORT OF THE COMMITTEE OF TWELVE.

SELECTIONS TO BE MEMORIZED.

Pupils should commit to memory not less than six selections each year. For additional helps, the "Humane Educator and Reciter," and "Songs of Happy Life," by the Art and Nature Study Pub. Co., Providence, R. I., are specially recommended.

First and Second Years.

"Baby Bye".....Theodore Tilton
"A Visit from St. Nicholas".....Clement C. Moore
"Sweet and Low".....Alfred Tennyson
"Dutch Lullaby".....Eugene Field
"Obedience".....Phœbe Cary
"The Brown Thrush".....Lucy Larcom
"Twinkle, Twinkle, Little Star".....Jane Taylor
"Seven Times One".....Jean Ingelow

"Little Boy Blue"..... .....Eugene Field
"Suppose" .....Phœbe Cary
"Marjorie's Almanac" .....T. B. Aldrich
"Little by Little".....Luella Clark
"The Dream Peddler" .....Lucy Blinn
"Do All That You Can".....M. E. Sangster
"Nobility".....Alice Cary
"The Vicar's Sermon" .....Charles Mackay
"America".....Samuel F. Smith
"Little Birdie" .....Tennyson
"The Frightened Birds," ("Humane Education").....Anonymous
"Jack-in-the-Pulpit".....Whittier
"If I Were a Sunbeam" .....Lucy Larcom
"Wynken, Blynken, and Nod".....Eugene Field
"Wishing," (in "Heart Culture").....Emma E. Page
Others from the readers.

Third and Fourth Years.

"The Barefoot Boy".....John G. Whittier
"The Children's Hour" .....Henry W. Longfellow
"Lullaby".....Alfred Tennyson
"Snow Bound," first ninety-two lines.....John G. Whittier
"Old Ironsides".....Oliver Wendell Holmes
"The Sand Piper" .....Celia Thaxter
"Robert of Lincoln" .....William Cullen Bryant
"Paul Revere's Ride".....Henry W. Longfellow
"The Builders".....Henry W. Longfellow
Selections from "Hiawatha" .....Henry W. Longfellow
"Rainy Day"..... .....Henry W. Longfellow
"The Corn Song".....Whittier
"The Death of the Flowers".....Bryant
"The Butterfly Fad.....Ella Wheeler Wilcox
"The Frightened Birds," ("Heart Culture")..
"The Holidays," ("Heart Culture").....
"Good Queen Bess" ("Heart Culture").....
"Catching Beautiful Beck" ....Marian Douglass
"Our Happy Secret," (Humane Educator).....
Others from the readers.

Fifth and Sixth Years.

"The Chambered Nautilus".....Oliver Wendell Holmes
"Over and Over Again".....Josephine Pollard
"The Crow's Children".....Alice Cary
"Old Ironsides"..... .....Oliver Wendell Holmes

"The Boys".....Oliver Wendell Holmes
"The Good Time Coming".....Charles Mackay
"The Blue and the Gray".....Francis Miles Finch
"The Brook"..... .....Alfred Tennyson
"Whittling".....John Pierpont
"What Might be Done".....Charles Mackay
"Battle Hymn of the Republic".....Julia Ward Howe
"Ring Out, Wild Bells".....Tennyson
"The Planting of the Apple Tree".....Bryant
"The Village Blacksmith".....Longfellow
"The Mountain and the Squirrel".....Emerson
"The Common Question".....Whittier
"A Little Brown Wing," ("Heart Culture")..
"Tom" ("Heart Culture). .....
"A Bloodless Sportsman"..... .Sam Walter Foss
"The Dawn of Peace" ("Heart Culture").....Ruskin
Others from the readers.

Seventh and Eighth Years.

"Song of Marion's Men".....William Cullen Bryant
"The Landing of the Pilgrims"..... ....Mrs. Hemans
"The Ship of State".....Henry W. Longfellow
"The Centennial Hymn".....John G. Whittier
"Abou Ben Adhem".....Leigh Hunt
"The Manliest Man".....George W. Bungay
"The Way to Heaven".....J. G. Holland
"Love of Country"..... Walter Scott
"Daily Work"..... ....Charles Mackay
"The American Flag".....Joseph Rodman Drake
"Gettysburg Address".....Abraham Lincoln
"My Country".....James Montgomery
"The Concord Hymn".....Ralph Waldo Emerson
"Marmion and Douglas"..... .....Walter Scott
"Westward—(Columbus)".....Joaquin Miller
"Order for a Picture".....Alice Cary
"What Did We Catch," ("Heart Culture")...Kate Kelsey
"The Bell of Atri".....H. W. Longfellow
Others from the readers.

THE POEMS I HAVE TAUGHT, AND HOW THE THOUGHT HAS BEEN DEVELOPED.

(*Third Grade.*)

The following report from teachers in the Tacoma schools will be suggestive to others:

I commenced my work in this, as in all other studies, with a review. The pupils recited "The Children's Hour," but I found they had no clear ideas as to the thought. I told them how fond the author was of the little ones, and that "grave Alice and laughing Allegra, and Edith with Golden hair," were his own little girls; how busy he was all day in his study, but when the the lights began to lower, the children knew he was ready for them; and he would hear the patter of little feet, and voices soft and sweet, as they would rush to his room for an evening romp. Hence the name, "Children's Hour."

I made them acquainted with the author and interested them in his life; then I selected a poem which seemed in harmony with our nature study—"The Birthday of Agassiz." I spoke first of Agassiz's life work, then placed the first stanza on the board. We spoke of "the pleasant month of May" and all the beauties of *that* month; of the beautiful scenes which must have been in that mountain home; I pictured the little child asleep in his cradle. "And nature, the old nurse," we talked of the things of nature. "The Story-book" was flowers, birds, trees, etc.

In the third stanza, "Come wander with me into regions still untrod," I questioned the meaning, and received the answer: "A place where people had never been." The manuscript of God was explained by some type written sheets.

"Whenever the way seemed long
Or his heart began to fail,
She would sing a more wonderful song,
Or tell a more marvellous tale."

The "wonderful songs" were the songs of birds and brooks; the "marvellous tales" were the more beautiful things which were unfolded to him in nature.

I told them that those who studied nature and spent their lives among birds, trees, flowers, etc., kept the heart younger; hence, "she keeps him still a child."

"The rush of the mountain stream
From glaciers clear and cold."

We talked of our own beautiful mountain with the glaciers at its base, and the clear streams we find in our mountain wilds.

And the mother at home says, "Hark!
For his voice I listen and yearn,
It is growing late and dark,
And my boy does not return."

Here I told them of the old mother in her mountain home, and how she missed her boy who was still a boy to her, though a man of fifty, but his work drew him to other lands, and

"He wandered away and away,
With nature the dear old nurse,
Who sang to him night and day,
The rhymes of the universe."

PLAN FOR TEACHING MEMORY GEMS.

(*Fifth Grade.*)

The following poem was placed on the blackboard:

"True worth is in being, not seeming,
In doing each day that goes by,
Some little good, not in the dreaming
Of good things to do by and by.
For whatever men say in blindness,
And spite of the fancies of youth,
There's nothing so kingly as kindness,
And nothing so royal as truth."

—*Alice Cary.*

The poem was first read by the pupils in concert, and then explained by them with some assistance from the teacher by means of skillful questioning.

Questions similar to the following were asked: "What do you understand by 'true worth?'" "What is the difference between 'being and seeming?'" The distinction was made clear, and the pupils were encouraged to give illustrations from their own experience. The next three verses were taken together as a whole, and the pupils called upon to explain them and tell the difference between doing the little good each day and dreaming of great things to do by and by.

In the fifth verse pupils were asked, "What is meant by 'men say in blindness?'" "Are the men really blind?" The pupils were told that people were often called blind when they cannot understand clearly.

The pupils were called upon to explain what is meant by the "fancies of youth."

Pupils were led to understand that the "fancies of youth" are the thoughts and plans which young people have for the future, and of the "great things" they will do "by and by."

In the last two verses "kingly" and "royal" were explained as something belonging to a king, that is of the highest value.

Pupils were told that if a king, even, is not kind or truthful he can not be truly noble, and that however lowly one's station in life may be, he may be a true king in character, by being kind to every living thing and truthful in word and act.

Pupils then copied the selection carefully, noting the marks of punctuation and the author's name, which should be pronounced for and with them; and then committed the poem to memory.

Exercises in developing and outlining oral lessons in nature and history, and also in outlining lessons in the text, form a basis for the best language work. The following are given to suggest a general method, to be modified according to condi-

tions. In all language and composition exercises, children should be drilled in speaking and writing statements and paragraphs as the expression of their own thoughts and discoveries.

THE MUSCLES.

(*Primary Grades.*)

Well, little girls and boys, I am glad to see by your bright eyes that your telegraph offices are all in good working order this morning, and I am now going to tell you some more about those wonderfull little little nerves we talked of. I want you to know how it is that they can make you snatch your hand away from the hot stove, or put it to your eye to remove the cinder.

Of course you know that our arms and legs, our fingers and toes, our mouth, our eyes, our heart, all move by means of muscles. Raise your hand to your shoulder, and you can both see and feel the action of the muscle that lifts it. Move your fingers and you can see the play of the cords that run from the muscles in your arm to your finger-ends. You have about 500 of these muscles in your body, and they are long, short, flat, round, and even fan-shaped; but all are made up of fine, dark red, thread-like fibers bound together like skeins of thread. With each little strand one of the telegraph lines is connected, so that the brain in a second can send a message to the whole muscle, telling just what motion you want to make. Isn't that wonderful?

These muscles are just like the nerves about being injured by ill health. Don't you know how weak a person gets when he is sick? It is because the little muscular threads are injured. Now you will understand why the drunken man's hand trembles so, and why he falls down so easily; and have you ever noticed that a smokers's hand generally trembles when he is lighting his pipe? If you want to have strong muscles and steady nerves, don't ever drink or smoke or chew; for the alcohol and tobacco shrink up and harden the tender fibres so that they cannot work well.

There is another queer thing about these nerves and muscles; that is the way they are fed, for you must know that with so much work to do they would soon wear out if they were not constantly strengthened. It is because your bones and muscles and nerves are in need of refreshment, that you get so hungry. A great writer has said "Boys eat as if their legs were hollow;" and it is no wonder, when we come to think how many motions all you boys make every day and how busy you keep every nerve and muscle in your lively bodies; but, boys, if you want to be first-class hands at foot-ball or base-ball or any of the nice games that big boys play, don't overload your stomachs, and don't fail to eat good, nourishing food at regular hours.

I must stop now and put some more questions on the board for you.*

1. What do we call that part of our bodies with which motions are made?
2. Are there many of them?
3. What shape are they?
4. Of what use are they?
5. Can you see them move?
6. Can you see the nerve move?
7. Are the muscles strong?
8. How do they know when to move?
9. How do alcohol and tobacco affect them?
10. In what respect are the nerves and muscles just alike?

From the Michigan Course of Study.

EARTHWORM.

(Study for Primary Grades.)

AIM OF WORK.

To lead the children to appreciate the use of the earthworm, to see that such an apparently unattractive, insignificant worm has a beautiful work to do, which is of value to plants and to mankind.

LESSON I.

Some morning question the children in regard to the small holes and deposits of earth around them that appear in countless numbers of places along their paths. Some may know how they come to be there. Let them observe during the day. Take the children out to the home of the earthworm. Note the number of little mounds and openings, the places in which the earthworm lives, hard earth as well as soft. Cut into earth showing directions which the openings take. Note the shape of the earthworm's home.

LESSON II—HABITS.

Movement.

Note the way in which she moves on the surface of the earth.

Rapidity of movement.

Note effect of handling earthworm. Does she run away from danger? Does she protect herself from harm?

*The answers to these questions will be written as a paragraph or composition.

Home.

Place.

Making.

Moving.

She makes her home in the ground and eats the earth and piles what she doesn't want at the door. She moves often so she can get more work done.

Now when does she move? We will have to watch several days to find that out. Watch the piles of earth as you come to school and as you come home. (They will see that the earth is fresh in the morning, and will see that they must work at night.)

Does she eat anything besides earth? We will have to take some to visit us and offer it different things to eat, to see. See it eats only such things as make soil, as dried leaves, etc.

Summary of Habits.

Mrs. Earthworm lives in the same house only one day, and builds a new one every night. She eats the earth out of her house as she builds it—she likes earth better than anything else to eat. She is a little gardener and makes the soil fine so we can raise flowers. God made her so she liked to do this to help us, and we must be kind to her.

LESSON III—ADAPTATION OF STRUCTURE TO HABITS.

Study the live worms in the schoolroom—shape of body, how adapted to locomotion, absence of legs. It can stretch its body out until it is very long. This helps it in digging its house.

Its head is very pointed and very small because it is easier to push it into the ground. We sharpen a stick to make it go into the ground easier.

It has no ears nor eyes, because they would get full of earth in the ground and they don't need them, as they live in the earth and couldn't see if they had eyes.

LESSON IV.

Give simply what the children can see. The earth that is taken up with the worms is full of tiny baby worms looking like fine white thread, and not one-half an inch long. Look at them under the microscope and see that they move around more and

faster than the mother worm does. Watch them eat earth. They don't live in the house with their mother because she moves so often and has to work so hard that she couldn't take care of them. So they live in the softer earth and dig little houses of their own.

Keep them in the room and watch them from time to time, measuring the parent worm and also the children to see how fast they grow.

GENERAL SUMMARY.

1. Home.
   In the ground.
   Known by a pile of earth at its door.
   Is a long round hole.
2. Habits.
   Builds a new home every night.
   Earth from the building passes through body.
   Live on substances taken from the earth.
   Good gardener and breaks up the soil for us.
   Works at night so we won't bother.
3. Adaptation to habits.
   Body stretches like rubber so it can work faster.
   Head pointed and very small so it can work its way into the ground easier and better.
   Has no eyes nor ears for it needs none.
4. Life History.
   Little worms build their own houses and get their own food, grow up to be big worms.

Read the story of "The Little Gardener," in Florence Bass' "Nature Stories for Young Readers."

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WATER: ITS FORMS AND USES.

(*Primary and Intermediate.*)

I. OBJECT OF THIS WORK.

1. To interest children in one of the most common things about them, and to help them observe and learn how much the water does and how it works.

2. To give them something based on their own observation to think and talk obout.

3. To lead them to watch and see what is going on about them.

4. To serve as a basis for future work in geography. To prepare them for the study of the work of water in soil and earth making, and to help them to better understanding the use and work of water in plant life.

II. USES OF WATER.

Lead the children to think and talk about the use of water.

To man.

To other animals.

To plants.

To the earth (form of rain and snow).

III. WHY WATER IS USEFUL.

a. Show dissolving power of water by dissolving salt, sugar, snow, etc., in water.

b. Show cleansing power of water by washing something sticky or dirty.

c. Show power to float things such as wood, sawdust.

d. Bring out by questioning the fact that water is useful to man, animals and plants because it dissolves their food; salt, sugar, tea, coffee for man; lime and soil for plants, cleansing them outside and inside; and that rain and streams are useful in cleansing the earth.

IV. FORM OF WATER, EVAPORATION AND CONDENSATION.

Have children dampen slates and leave them on desk; some dampen cloth and hang in schoolroom; put a little water in a shallow dish; let it stand several hours and note what happens. Put some in a quart measure and measure each day. Try same near heat, and have children note how heat aids evaporation.

Boil water over fire in an open vessel.

a. What takes place?

b. What becomes of the water?

c. Into what is it changed.

d. What causes the change?

Boil a measured quantity of water.

a. How long does it take for it to boil away? Compare with time it took the same quantity in previous experiment.

b. What is the effect of heat on water?

Boil water in a tea-kettle.

a. What comes from the spout of the tea-kettle?

b. Hold slate over it. What forms? Water dust.

c. Can you see this close to the spout?

d. Hold the slate there. What forms on it? Water.

Then there is water there that we cannot see. Heat turned it into something we call vapor.

a. Hold a cold slate in the water dust. What forms?

b. Into what does the slate turn the water dust?

c. Hold cold slate in vapor between water dust and spout. What forms on slate?

d. Into what does the cold turn the vapor?

e. Let some water stand in a warm place in a glass vessel. What forms on the under side?

f. Breathe on a cold window pane. What forms?

g. Notice breath on cold day. Why?

Have children study evaporation from sidewalks, roofs, and study at home on washing days.

a. Why do windows and ceiling get wet?

b. Why does kitchen get so full of water dust when outside door is open?

c. Why do they spread out clothes to dry?

V. FORMS OF WATER.

A. Fog.

1. Seen on wash day.
2. Breathe on cold surface to show formation.

B. Clouds.

1. Uses.
2. Have children notice steam floating from some engine.

Note: When children have a clear idea of what evaporation is, give them the term.

3. Study forms, colors, movements of clouds.
4. Sunrise and sunset clouds.

C. Rain.

1. Cold slate held over tea-kettle shows how rain is formed.

D. Frost, snow and ice.

1. Notice windows and see how frost is formed.
2. Children watch snowflakes.
3. Bring out use of snow.
   a. To plants—covering.
   b. To earth—pure white cover.
   c. To man—sleighing, etc.

—Miss Mary A. Grupe,
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HISTORY STORY WORK.

LESSON PLAN ON JOAN OF ARC.

(*Fifth or Sixth Grade.*)

Aim.—To show the beauty of perseverance, self-denial, patriotism, courage and justice. Also, that pupils may know the story for its historical value, and for the benefit they may derive by reproducing, both orally and by writing, so that they may learn to express themselves in good English.

Preparation.—Talk to pupils concerning the political affairs of France during the fifteenth century. Also a little concerning the people—their manners and customs, war equipments, dress. Show pictures illustrating these things.

Presentation.—Place and time of Joan's birth. Tell of conditions and character of her parents.

Question.—Considering her parentage, what would the supposition be as regards Joan's life in her younger days? Relate to pupils some of her daily life.

Question.—What effect would this kind of life have upon Joan? What kind of a character would you suppose she would acquire?

Speak of her religious training, of her first vision, and effect of this vision upon herself.

QUESTION.—What would these visions finally lead her to do?

Tell exact circumstances after pupils have made their answers.

QUESTION.—What does this show us in regard to Joan's character?

Relate how she was received by Baudricourt. Relate her repeated efforts to see the Dauphin, even after her brutal reception.

QUESTION.—What indication of character have we?

Tell of attitude she assumed about seeing the Dauphin.

QUESTION.—Considering the kind of people of that day, how would they regard Joan?

QUESTION.—Do you think she finally saw the Dauphin? Relate this event to pupils after their own replies. Tell of her journey, her reception at the court. (Read a description of it). Tell the Dauphin's attitude toward her, result of her interview with the ecclesiastics after the Dauphin sent her there, of the g athering at Blois, of her trip to Orleans, arrival there, and of the attitude of populace toward her.

QUESTION.—How would Joan feel about her success, and how did she show this feeling?

Tell of her invariable reply as to the power of God, when the success of her enterprise was doubted.

QUESTION.—How would her religious zeal affect the people?

Relate the treatment of the English toward her. Tell of her vision connected with her first victory over the English, and describe the battle.

QUESTION.—How did the sight of the dead soldiers affect Joan? How would she act toward the wounded?

Tell how the political leaders regarded Joan—that is, with envy. Tell of subsequent victories, and how received. Mention again her religious zeal. Tell of the final deliverance of Orleans; of her reception after the victory; tell of her behavior during the battle.

QUESTION.—What does this indicate of her character?

Relate her actions toward and concerning the French prisoners and their ransoms.

QUESTION.—What indication of character? Read a description of the coronation at Rheims.

QUESTION.—How would the common people regard Joan after all these victories? How would she receive this regard? What of her character is brought out?

Tell of the attempt to regain Paris.

QUESTION.—How would this retreat make Joan feel? How would the King's courtiers feel about Joan's many successes? How would this make Joan feel?

Tell of her presentiment of her downfall; of her failures in successive battles; of her resistance.

QUESTION.—What motive did she have?

Relate her capture by the English. Tell of the ingratitude of the French King.

QUESTION.—What does this show of the King's character?

Tell how the English regard Joan—as a witch.

QUESTION.—How was she treated accordingly?

Tell all about her imprisonment, her attempted escape, and her deliverance to the English by the French King, and treatment received from the English.

QUESTION.—What would you suppose was Joan's behavior during this imprisonment.

Tell of further visions, attitude toward the priests.

QUESTION.—What indication of character have we on her part?

Tell how she was regarded by the English as a heretic.

QUESTION.—What was the result of this feeling on part of the English?

Read about her trial before the judges. Tell of the result of the trial. Tell of her execution.

QUESTION.—Knowing her religious zeal, how did she act at the execution?

Tell how the people felt about it after her death.

SUMMARY.—Have pupils give a written and oral character sketch of Joan, bringing out as many attributes as the story in-

dicates. Also a written and oral reproduction of the historical incidents of the story.

This story will take a week for presentation, oral and written summaries of each day's lesson should be made at the close of the presentation.

MATERIAL.—Use the map freely, so that the pupils will understand the geography of the whole story.

Also use pictures very freely wherever convenient. Allow pupils to illustrate parts of the story themselves.

Read interesting parts to the children from different authors.

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OUTLINE STUDIES.

The following outlines are suggested by Miss Mary E. Page, author of "Heart Culture."

OUTLINE OF LANGUAGE LESSON ON BIRDS.

(*For First, Second and Third Grades*).

1. How many kinds of birds have you seen in your town?
2. Which would you like better, to be free or in a cage?
3. Which do you think the birds like better?
4. What can you do that will help you to make friends with the birds?
5. In winter, tie a piece of bread to a sheltered branch in a tree and watch for the birds. Tell what you see.
6. If we love the birds will we throw at them, shoot at them, or wear their feathers?

OUTLINE OF LANGUAGE LESSON ON THE CAT.

(*For Fourth and Fifth Grades.*)

1. What kinds of food are best for your cat?
2. Do you keep clean, fresh water where your cat can get it when she wants it?
3. Does your cat like a warm place?
4. Is it kind to put her out of doors on cold nights, after keeping her in the house through the day?

5. What makes a cat purr?
6. In what ways can you make your cat happy?
7. What good does it do you to be kind?

OUTLINE OF ESSAY ON THE COW.

(*Grammar Grades.*)

1. The origin and development of the cow.
2. The wide distribution and large use of her products.
3. What constitutes right care of the cow?
4. The economic value of kindness and intelligent care of her.
5. The health value of kind and intelligent care of the cow to those who use her products.
6. The claim of the cow upon man's kindness because of her timid nature.
7. The effect of kindness upon the character of the one who bestows it.
8. Some of the great pictures and poems having the cow or her kind for subject.

The teacher may abbreviate or vary this to suit the grade taking it up.

The texts books will be used in the fourth grades and above.

FOURTH GRADE.

Elementary Lessons in English, to page 75.

FIFTH GRADE.

Elementary Lessons in English, finished.

SIXTH GRADE.

One Book Course, to page 151.

SEVENTH GRADE.

One Book Course, to page 237.

EIGHTH GRADE.

One Book Course, finished and reviewed.

WRITING.

Two systems of vertical penmanship have been adopted, but the similarity in general plan is so marked that the transition from one to the other at the beginning of the fifth year will be easily made.

The basis of each system is the getting of clear concepts of letters by detailed analytic perception. From the Teachers' Manual for the Natural System of Vertical Writing is quoted the following :

TRAINING IN GETTING CLEAR CONCEPTS.

It must be remembered that the child does not try to reproduce directly on paper the copy before him. It is rather the mental image acquired by looking at the word or letter that his hand tries to represent on paper. Hence, an important part of the writing lesson is to train the pupils in accurate perception of the forms and relations of the letters. This requires on the part of the pupil a careful, scrutinizing observation of each word of the copy so that the first general perception of the word as a whole is followed by a detailed analytic perception of the letters, their proportions, and relations, and then a re-grouping of these detailed concepts in a clear image of the whole word. For this reason, when taking up a new copy, especially in the primary grades, it is best for the pupils to have separate sheets of practice paper. Let the pupils look at the copy for a short time, then close the copy-book and write it on their practice paper. They should then open the book, compare their reproduction with the copy, and this should be repeated until the pupils show that they have a fair *concept of the form of the copy*.

From the Teachers' Manual for St. John's Vertical Writing is quoted the following :

THE ANALYTIC WRITING TABLET.

No copy book is used. Tablets are used with a special ruling at the top of the page. This special ruling is illustrated by any one of the plates in this book, but with the key-diagram, reduced, at the left. All are not on the same scale.

The page below the special ruling is the same as ordinary writing paper. The best size of page is about six by nine and one-half inches. The quality of paper should be such as to allow the use of a pen of medium fineness.

The pages are torn off as fast as they are filled, and are collected by the teacher. They may be preserved for future reference to note im-

provement or again distributed to be used for exercises in other lessons. One side only is ruled.

These pages may be used for compositions and examinations. This will secure the much desired uniformity in size and quality of paper for these purposes.

Seldom is anything well done when not done according to a preconceived plan. We do not have copies for our business letters. The form must be learned. But with many, the knowledge of form has not become a *habit of mind*, (memory) but a habit of the hand.

Without a mental picture of the form of the letter, there is nothing to guide the hand in the absence of the copy. If, then the hand move, nothing will direct the movement except the abiding tendency from former acts—habit—and if the habit be not yet fixed, some of the movements will be wrong. Wrong habits are as easily formed as correct ones.

One great reason, therefore, why there are so many poor writers, is because there *was no knowledge of the form to guide the hand while learning*, and bad habits were formed.

The proper way, then, is to teach the correct form before the habit becomes fixed; that is, teach *first form, then movement.*

Each letter writen by the pupil is made from the copy in his mind. The copy on the paper is simply his expression to us of what his concept is. It is not from this copy that he writes below.

The St. John tablet is very suitable for spelling blanks, compositions, language exercises, etc., wherein the pupil's writing is put to the test for legibility and neatness. For general or specific directions the teacher should consult the manuals of the respective systems.

The copy books are to be used for the first four grades, and the tablets are to be used in the grammar grades.

ART.

PRIMARY GRADES.

In these grades the children are not to be burdened with formal work, such as perspective, type, solid study, etc. Their work is to be free, representative, decorative and industrial. The teacher must guide and direct, else no progress is made.

Making the drawing work correlate with the other work of the school. Model, paint, and cut objects and scenes met with in Nature Study, Geography, History, and Literature. The reading furnishes a fund of material. Whittier's "Barefoot Boy," in lead pencil or cut

in paper; "The Village Blacksmith," "Mother Goose Rhymes," "Seven Little Sisters," all are rich in subjects.

The animal and plant life studied in Nature and Geography furnish material for expression in clay, color, lead and cutting.

For an appreciation of the function of drawing, and the adaption of drawing to the children, the teacher is advised to read,

Col. Parker's "Talks on Pedagogics."

The "Art Education," published by J. C. Witter Co., New York, "The Perry Magazine," published by The Perry Pictures Co., Malden, Mass., are valuable art magazines.

The Art Number of the Chicago Record; Elmer Brown's "Studies of Children's Drawings."

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ART AND ART EDUCATION IN THEIR RELATION TO THE SOCIAL WELFARE OF THE PEOPLE.

By F. H. SIMONS.

True civilization and social welfare are very closely connected. It is therefore worth while before discussing the theme, to say a few words about this social quality called civilization. It will help us to see more clearly and quickly the great necessity of bringing civilization—that is, the general intelligence—to a higher standard.

Art influences the development of the mind in the right direction It calls for close and strict observation, and thus cultivates the power of seeing. And as true seeing is more than a mere ocular phenomenon, as it is rather a reciprocal mental process, the culture of seeing means the culture of the mind, the generation of intelligence.

Art trains the judgment, because accurate, definite seeing leads to definite thinking, and definite thinking increases general wisdom and prompts the individual to better judgment. Better judgment means better taste, and better taste means better selection, and better selection produces progress, better industry, better trade and commerce, better general conditions.

Art affords the best opportunities for the culture of productive imagination and intellectual originality. This means a great deal, because the faculty of intellectual self-activity and creative inventiveness forms the mainspring of achievement. It is the promoter of progressive evolution, the vital cause of an industrial life that makes "life worth living." Imagine a life without industry! It would be mere animalism; and industry without art, mere barbarism. Art is the soul of life; without it life would be dull and aimless, trade would almost cease, and

commerce become unknown. Commerce thrives, not on tramps, not on low wage earners, but on well-to-do customers. Art feeling creates new wants, new desires, new aspirations, which not only cause industry and commerce to flourish, but which stimulate the intellect of the people to a higher development, broader views, loftier and grander emotions.

It is art, not material, which generates wealth. Industry flourishes not on account of the intrinsic value of the raw matter, nor the quantity of raw unguided imagination; industry flourishes because of the new wants art creates and because there is scarcely any limit to the market value that intelligent taste and cultured imagination can confer upon an object through beauty of form or decoration, however inexpensive the material of which the object is made. It is the art spirit and art skill that makes a block of marble or a lump of clay or a few pounds of iron worth thousands of dollars.

To lead the children in school and home life to this mode of right self-activity and original expression should be our aim, and they should, therefore, have ample chance in their early days to develop along these lines, because youth is the time for forming habits, and every day the power that is not used is failing. The schools must give their pupils the opportunity for development and self-expression in art. Not mere expression, but guided self-expression, rightly stimulated self-activity, is the key-note. Activity we may find in the most slavishly conducted communities or schools, or in a community of active rascals, but cultured self-activity only where free thinking and free doing have been fostered and encouraged for the general wellfare. Mere doing something does not necessarily induce growth. Our homes must be provided with children's rooms, where the youth finds ample space and liberty for testing by actual work the inborn art impulse and inventive spirit. The child needs a workroom as the adult needs a study or laboratory for developing and perfecting individual thinking and doing. How little in our country the child is taken into consideration in home life in the right light and spirit can easily be seen by the fact that one must be an expert hunter to find a children's workshop.

"Who has the schools has the future" is a well-known fact. The schools are the formative agencies for the coming generations. Thus whatever appears in the life of a nation must first appear in the schools. For this reason, if we want an art-loving people, an art industry, better feeling and thinking, we must begin in the schoolroom with the embodying of such needed qualities. This will force the educator not only to investigate the arts as to their quality for promoting progress and welfare, but to acquaint himself thoroughly with the very means and ways of giving instruction in the same, of arousing the children's interest in this line of work.

Not where we stand, but the direction in which we move, will tend to great things.

POINTS OF VITAL IMPORTANCE IN ELEMENTARY ART EDUCATION.

1. Education.

The culture (development) of the moral (healthy) qualities of the human being individually and of the human race collectively (welfare of the being).

2. Motto: Mens sana in corpore sano.

Crippling of hand, eye, and other organs.

Proper material (pencil, brush, paper, writing books, models, school desks, schoolroom).

Proper position (in drawing, reading, writing).

Proper place (near, far-sighted).

Health of pupil—Health of teacher. (Work of science all for health.) (Work of art all for health.)

3. Educational equation.

Child+Experience (Teacher) = Welfare (aimed at).

4. Experience.

Direct experience: Experimental self-knowledge; direct knowledge produces; direct knowledge necessary for.

Indirect experience: Book knowledge; books; understanding of books, art works, etc.; critic of skill and time put in art works; individuality, character.

4a. Teacher.

Liberal education; good health (pay). Time for self-culture; time for recreation.

5. Child.

The child is best known by its activities:

1. Physical activity (play work—gymnastics).
2. Language activity (language work—literature).
3. Artistic activity (art work—art).
4. Historical activity (history work—history, geography).
5. Scientific activity (science work—science).

5a. Tendencies of these activities of a twofold nature.

Moral (to develop), healthy, social, altruistic. Immoral (to annihilate), unhealthy, antisocial, pure egotistic.

(Duty of education: Cultivation of taste, art feeling, altruistic sentiment.)

(Self-love and self-respect—Flobbier.)

6. Culture of the activities.

(*a*) *Exterior absorbing organs.*—1. Eye (sight). 2. Ear (hearing). 3. Hand (touch). 4. Nose (smell). 5. Mouth (taste). 6. General senses.

(*b*) *Mind laboratory.*—The interior organs, with the hereditary qualities of intuition.

(*c*) *Exterior expressing organs.*—1. Tongue. 2. Hand.

(Every day the power that we will not use is failing us.)

(The mind speculates, the hand tests by the law of practical application.)

7. The three leading school systems.

1. The classic. 2. The trade. 3. The true liberal (practical).

8. The true liberal (modern practical) school.

Common nucleus of all studies in the kindergarten.

Code of education: Extension of mind and subject code.

Co-relation of studies and concentration of thought.

Too early bifurcation of studies in the high schools.

9. The different branches of study.

1. Literature. 2. Science. 3. Art. 4. History. 5. Music. 6. Gymnastics.

Proper balance depends upon the child's natural growth; educational and practical value (time, quantity, quality).

The educational value of a study depends on its influence in developing: (1) The receptive external organs; (2) the interior assimilating and creating organs; (3) the expressing external organs; (4) the general senses for general health.

10. The arts (classification).

Space arts, time arts, etc.: Their educational value; their practical value; ethical life.

11. Sequence of work and method in art instruction.

Pictorial. Decorative. Constructive.

Chief secret: Ample chance—we learn to do by doing.

Central idea: Development of selfhood (often crippled through lack of technical skill).

12. The main aim in all work.

Awakening of the latent powers and developing of the capacities in the right direction.

Taste and inclination for a profession.

Self-respect and true respect for others.

CONDENSED OUTLINE OF WORK FOR THE GRADES.

Synopsis of art work for first four years.

Pictorial work.	Decorative work	Constructive work (form and manual training.
Coloring of outline pictures (printed picture books). Object drawing and painting: (*a*) Natural objects (appropriate to the season and in connection with nature work); (*b*) industrial objects (in connection with trades studied). Human figure (in action). Illustrative and imaginative: Sketching and illustrating stories, nature work, etc. Blackboard sketching. Models: Use simple objects with essential features and present them in groups. The children should be familiar with the objects through work in previous lessons.	Color, sensation, and recognition: (*a*) From the round (balls, beads, sticks, etc.). (*b*) From the flat (colored paper); no theory in regard to combining or mixing. Color nomenclature. Arrangement of patterns, with sticks, tablets, etc. Decorative painting of— (*a*) Clay ornaments (tiles, etc.). (*b*) Paper, life forms (boxes, baskets, furniture). (*c*) Ornamental paper forms (drawings, covering with flat washes, elaborating). Dictation exercises.	Clay modeling: Natural and artificial objects. Type and ornamental forms. Folding, cutting, and pasting of— (*a*) Geometrical forms (types). (*b*) Life forms, (furniture, etc.). (*c*) Ornamental forms.

N. B.—As the art work is so closely connected with the different subjects taught, the teacher should be the best judge as to the immediate need of her class, but she should see to it that the children under her care get, systematically, some work from each branch and as much as the health of the child permits.

Synopsis of art work for the fifth and sixth years.

Pictorial work.	Decorative work.	Constructive work (manual training).
Object drawing and painting (sketching easel): (*a*) Industrial, (*b*) Natural, (*c*) Type forms } Objects in Groups. Silhouette painting. Human figure (in action). Illustrative and imaginative sketching in pencil, pen and ink, water colors. Blackboard sketching. Free-movement drill. (Pictorial painting with the brush in masses without previous outline sketching.)	Drawing and painting of original designs: (*a*) Geometrical. (*b*) Vegetable. Direct brush designing in connection with the pictorial silhouette work. Decoration of the cardboard forms. Dictation work. (In all decoration work lead the child from its free realistic expression of decoration to idealism and conventionalism, introducing the principles of spacing, repetition, variety symmetry.)	Making of cardboard forms. Reading of working drawings. Making working drawings (from hand). From the objects: (*a*) Typical forms, (*b*) Industrial forms (box, towel roller, etc.). Use for making working drawings, "the shop method."

N. B.—Each branch should be taken up, if possible, once a week and in connection with other work.

Never interfere with the free expression of the pupil in regard to technic or thought expression as long as there is artistic feeling. Help to develop individuality.

All models should be as large, interesting, and beautiful as possible.

Synopsis of art work for grades seven, eight, and eight and one-half.

Pictorial work.	Decorative work.	Constructive work (manual training).
Object drawing: Sketching easel, in pencil, water colors, pen and ink. Compositions of type solids—still life of industrial and natural objects. Human figure (in action). Illustrative and imaginative: Sketching in pencil, pen and ink, water colors. Time sketches: Indoor and outdoor. Blackboard sketching. Free-movement drill. Perspective: Lead the child by the inductive method from seen and recognized facts to find the elementary rules of perspective. Light and shade: All pictorial work should, as much as possible, be expressed in light and shade.	Drawing and painting of original patterns and applied designs (initials, headings, covers, calendars, tidies, etc.). Principles of principality, progression, parallelism, continuity, leading lines. Plant analysis and conventionalism from flat studies and plants according to the season. Historic forms of ornaments.	Springfield Industrial Drawing Kit No. 2, 13 by 19 inches (free-hand and instrumental). Geometrical drawing (geometrical problems.) Working drawings (natural size or to scale) from models and given problems without models. Lettering.

Art is a culture study, the aim of which is primarily to cultivate, refine, and elevate æsthetic ideals.

Art develops originality, and qualifies men to aid in the increase of human wisdom and power and the promotion of human happiness by the production of new thought, new appliances, new forms of beauty, and new conceptions of æsthetic evolution.

In teaching art, the teacher has to deal chiefly with the three duties: (1) The enlargement of the receptive and reflective powers; (2) the training of the powers of expression or external representation; (3) the stimulation of the selfhood to original directive activity. They should be regarded as a unity, with the development of selfhood as the central idea.

Reference books for teachers' desk.

	Grade.
1. Paper Folding and Cutting. By K. M. Ball.	1–4
2. A First Year in Drawing. By H. T. Bailey	1–4
3. Color in the School Room. By Milton Bradley Co	1–4
4. Drawing and Designing. By Leland	1–6
5. With Brush and Pen. By James Hall	1–7
6. Sloyd—Educational Manual Training. By E Schwartz	1–8
7. Illustrative Blackboard Sketching. By W. B. Hintz	1–8
8. Drawing Simplified—Text Book of Form Study and Drawing. By D. B. Augsburg	1–8
9. Sketches for Object Lessons. By G. Zimmerman	1–8
10. Drawing in the Public Schools. By A. K. Cross	1–8
11. Uniform Examination Questions in Drawing (State of New York). By C. W. Barden	1–8
12. Lessons on Decorative Design. By T. G. Jackson	1–8
13. Æsthetic Manual (Designing) for Teachers. By L. Thompson	1–8
14. The Fine Arts. By G. B. Brown	1–8

15. Teachers' Manual—Part IV. Prang Educational Co..... 5-8
16. Mechanical Drawing. By F. Aborn..... 5-8
17. Mechanical Drawing—Manual for Teachers. By A. K. Cross.. 5-8
18. Students' Alphabets. By Keuffell and Esser..... 5-8
19. Light and Shade. By A. K. Cross..... 5-8
20. Color. By Church..... 5-8
21. School of Art Geometry. By Ben Johnson..... 7-8
22. The Essentials of Perspective. By L. W. Miller..... 7-8
23. Study of Ornamental Plants. By F. Moser..... 7-8
24. The Manual Training School. By Woodward..... 7-8
25. Wood Carving. By Leland..... 7-8
26. Bench Work in Wood. By W. F. Goss..... 7-8
27. History of Art, By Lubke..... 7-8

—Report of Superintendent of Indian Schools, 1898.

The rural schools cannot give art the time given to it in graded shools. Some work should be attempted, however. The value of drawing, in giving emphasis to other subjects, becomes more evident to the teacher who trys to teach it. For rural schools are recommended

Thompson's Two Book Course; D. C. Heath & Co.
Augsburg's Elementary Drawing Simplified; a teacher's manual for primary grades; Educational Pub. Co.
Augburg's Drawing Simplified, in four parts, for pupils of the grammar grades; Educational Pub. Co.

For teachers desiring to make a more extensive study, the following are recommended:

Thompson's Course in Drawing; D. C. Heath & Co.
Art Instruction in Primary Schools; First Year; Prang Education Co.
Art Instruction in Primary Schools; Second Year; Prang Education Co.
Part I., Elementary Course; Third Year; Prang Educ. Co.
Part II., Elementary Course; Fourth Year; Prang Educ. Co.
Part III., Elementary Course; Fifth Year; Prang Educ. Co.
Part IV., Elementary Course; Sixth Year; Prang Educ. Co.

All schools should be supplied with

Great Artist Series (10 cents a number); Educ. Pub. Co
Picture Study in Elementary Schools.

Part I., for primary grades; Macmillan Co.
Part II., for grammar grades; Macmillan Co.
Pupils' edition for each part.

The elementary text in English, fourth and fifth years, gives emphasis to picture study in the language and composition work.

MUSIC.

A school is not fulfilling its usefulness unless it abounds with song. National airs should be familiar to all children, and the theory of music should be taught where time permits. The following books are recommended as suitable for general use. A graded school may desire a graded series of books, which can be secured by addressing the various publishers.

Johnson's School Songs, 15 cents per copy, $1.80 per doz.; Fillmore Bros., Cincinnati, Ohio.
Johnson's Song Twigs, 20 cents per copy, $2.25 per doz.; Home Music Co., Logansport, Indiana.
National Songs and Hymns; The Orville Brewer Pub. Co., Chicago.
Merry Melodies, 15 cents per copy, $1.65 per dozen; A. Flanagan.
The New Century Songs; A. Flanagan.
Golden Glees; A Flanagan.
American Music Reader.
Primary Grades; Whitaker & Ray Co.
Grammar Grades; Whitaker & Ray Co.
Songs of The Nation; Silver, Burdett & Co.

SCHOOL LIBRARIES.

"It seems to be true that the greatest amount of reading is done by children between the age of twelve and fourteen, and that by the end of high-school course pupils settle down to one class of reading matter, what ever that may be. (*Proceedings of the National Educational Association*, 1897, p. 1019.) The importance of deciding what books are suited to children at this period, and of placing such books within their reach, will be readily conceded. Children will read what they like. If we can find out what they like and then provide it for them from literature true to life, now accessible, we may be reasonably certain that

the class of reading settled down to later will never drop below the level of the taste thus formed.

But to begin our selection for the child at the age of twelve is too late for best results. We must begin as soon as he learns to read, or even before if possible, by reading to him and by story-telling. Not the least of the difficulties is the selection of a few appropriate books from the vast number available."—N. E. A. COMMITTEE ON LIBRARIES.

"Pupils should, while in school, be trained to know and love good literature, to use reference-books, to economise time in reading, through the use of tables of contents, page-headings, etc.

Training pupils to read and love good literature is by far the most important work done in school. There is nothing else that a teacher can do at all comparable to it in value. It is the one thing the school does that continues to contribute to one's education so long as he lives. We should never forget that it is not the ability to read, but the use made of that ability, that contributes to the destiny of a child."—

N. E. A. COMMITTEE ON LIBRARIES.

"Children must be directed and trained in regard to their reading. They can no more be trusted to get their own knowledge of and taste for literature, unaided, than they can get their scientific and mathematical training in the same way.

If it is the duty of the state to see that its citizens know how to read, it is certainly no less its duty to see that they are trained to do the right kind of reading; otherwise the ability to read may be harmful rather than beneficial, both to the individual and to the state."—

N. E. A. COMMITTEE ON LIBRARIES.

A GRADED LIST FOR SCHOOL LIBRARIES AND SUPPLEMENTARY READING BOOKS.

FIRST GRADE.

Wiltse's Stories for Kindergartens and Primary Schools	Ginn & Co.	boards,	$ 25
Wiltse's Stories for Kindergartens and Primary Schools	Ginn & Co.	cloth,	35
Wiltse's Kindergarten Stories and Morning Talks	Ginn & Co.	cloth,	75
Stickney's First Reader	Ginn & Co.	cloth,	24
Stickney's Earth and Sky. No. 1	Ginn & Co.	boards,	30
Thompson's Fables and Rhymes for Beginners	Ginn & Co.	cloth,	24
Burt's Little Nature Studies for Little People, Vol. I	Ginn & Co.	boards,	25
Hodgkin's Little People's Reader	Ginn & Co.	cloth,	24
Turner's Primer and First Reader	Ginn & Co.	boards,	20
Lane's Oriole Stories	Ginn & Co.	boards,	
Bass' The Beginner's Reader	D. C. Heath & Co.	.....	25

Badlam's Primer	D. C. Heath & Co	25
Fuller's Illustrated Primer	D. C. Heath & Co	25
Griel's Glimpses of Nature for Little Folks	D. C. Heath & Co	30
Heart of Oak Readers, Book I	D. C. Heath & Co	25
Æsop's Fables—1	Educational Pub. Co.	5
Æsop's Fables—2	Educational Pub. Co.	5
Selections from Æsop—1	Educational Pub. Co.	5
Selections from Æsop—2	Educational Pub. Co.	5
Some Bird Friends	Educational Pub. Co.	5
Flower Friends— I	Educational Pub. Co.	5
Flower Friends— II	Educational Pub. Co.	5
Flower Friends—III	Educational Pub. Co.	5
Legends of the Springtime	Educational Pub. Co.	5
Story of the Buds	Educational Pub. Co.	5
Roots and Stems	Educational Pub. Co.	5
What Annie Saw	Educational Pub. Co.	5
Nature Study for Youngest Readers—Chase	Educational Pub. Co.	30
Krackowizer's First Reader	A. Flanagan	25
Hicks' Nature and History Stories	A. Flanagan	25
Three Little Lovers of Nature	A. Flanagan	25
Fables and Rhymes	Western P. H.	
Primary Nature Reader—Wilson	Macm. Co.	
Skyward and Back	School Ed. Co.	
Home and School Reader	Eaton & Co	
Nature's Byways	The Morse Co.	35
Easy Steps for Little Feet	A. B. Co.	25
Johonnot's Cats and Dogs	A. B. Co.	20
Lane's Stories for Children	A. B. Co.	25
Stories of Child Life—Book I	S. B. & Co.	25
The Hiawatha Primer	H. M. & Co	40
Riverside Primer and First Reader	H. M. & Co	30

SECOND GRADE.

Story of Bryant	Educational Pub. Co.	5
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Story of Lincoln	Educational Pub. Co.	5
Story of Lowell	Educational Pub. Co.	5
Story of Whittier	Educational Pub. Co.	5
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Story of the Pilgrims	Educational Pub. Co.	5
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Story of Cyrus W. Field	Educational Pub. Co.	5
Story of Holmes	Educational Pub. Co.	5
Story of Longfellow	Educational Pub. Co.	5

Stories of Revolution. I. (Lexington and Concord)	Educational Pub. Co.		5
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Stories of Revolution. III. (Battle of Long Island)	Educational Pub. Co.		5
Stories from Birdland	Educational Pub. Co.		30
Introduction to Nature's Story-Book	Educational Pub. Co.		30
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Scudder's Fables and Folk Stories. (Riverside Series, Nos. 47 and 48.)	H. M. & Co		30
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Warren's From September to June in Nature	D. C. H. & Co		35
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Science Reader, Book I—Murche	Macmillan & Co		25
Nature Study Reader, Book II—Wilson	Macmillan & Co		
Stories of Child Life, Book II—Badlam	S. B. & Co		30
Stories of Child Life, Book III—Badlam	S. B. & Co		36
The World and Its People, Book I—Dunton	S. B. & Co		36
Victor in Buzzland—Bell	A. Flanagan		25
Nature Myths and Stories—Cooke	A. Flanagan		
Davis' Nature Stories for Young Readers			

THIRD GRADE.

Grimm's Fairy Tales.—1	Educational Pub. Co.		$ 5
Grimm's Fairy Tales.—2	Educational Pub. Co.		5
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Selections from Grimm.—1	Educational Pub. Co,		5
Selections from Grimm.—2	Educational Pub. Co.		5
Stories from Garden and Field. I	Educational Pub. Co.		5
Stories from Garden and Field. II	Educational Pub. Co.		5
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Stories and Rhymes of Birdland. II	Educational Pub. Co.	.....	5
Stories and Rhymes of Flowerland. I	Educational Pub. Co.	.....	5
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Swiss Family Robinson	Educational Pub. Co.	.....	40
Hawthorne's Wonder Book	Educational Pub. Co.	.....	30
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Lessons in Humane Education, Parts I and II	Whitaker & Ray Co.	.....	20
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The Plant Baby and its friends—Brown	American Book Co.	.....	48
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Weed's Stories of Insect Life	Ginn & Co.	boards,	25
Andrews' Stories Mother Nature Told her Children	Ginn & Co.	cloth,	50
Blaisdell's Stories from English History	Ginn & Co.	cloth,	40
Frye's Brooks and Brook Basins	Ginn & Co.	cloth,	58
Bird World.—Stickney and Hoffman	Ginn & Co.		

Hawthorne's Little Daffydowndilly, etc. (Riverside Series No. 29)	H. M. & Co.		15
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Outdoor Studies.—Needham	Am. Book Co.		40
Stories of Animal Lire	Am. Book Co.		40
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FIFTH GRADE.

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Bird World—Stickney	Ginn & Co.	cloth,	50
De Foe's Robinson Crusoe	Ginn & Co.	cloth,	35
Kingsley's Water-Babies	Ginn & Co.	cloth,	35
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Hawthorne's Wonder-Book. In one volume	H. Mc. & Co.	cloth,	40
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Tom Brown's School-Days,.....Hughes.	Vaniety Fair,.....Thackeray.
Les Miserables,.....Hugo.	Henry Esmond,.....Thackeray.
Westward, Ho !.....Kingsley.	Cloister and Hearth,.....Reade.
Hugh Wynne, Free Quaker,.....Mitchell.	Scottish Chiefs,.....Porter.
Treasure Island,.....Stevenson.	Hypatia,.....Kingsley.
Ivanhoe,.....Scott.	Soldiers Three,.....Kipling.
Quentin Durward,.....Scott.	Kidnapped,.....Stevenson
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The Little Duke.....	Loyal Traitor.....
Prince and Page.....	For King or Country.....
Men of Iron.....	Commodore Bainbridge.....
Prince and the Pauper.....	Battle of New York.....
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Richard Carvel.....	Twenty Years at Sea.....
Boy Emigrants.....	.....

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Lays of Ancient Rome.....Macaulay.
Lycidas,.....Milton.
L'Allegro,.....Milton.
Il Penseroso,.....Milton.
Snow Bound,.....Whittier.
Tent on the Beach,.....Whittier.
Lady of the Lake,.....Scott.
Marmion,.....Scott.
Merchant of Venice,.....Shakespeare.
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Macbeth,.....Shakespeare.
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C. Co.....The Century Co., New York City.
C. P. Co.....Cassell Pub. Co., New York City.
C & Co.....Crane & Co., Topeka.
Cr. & Co.....T. Y. Crowell & Co., New York City.
C. W. B.....C. W. Bardeen, Syracuse, N. Y.
C. M. P.....C. M. Parker, Taylorville, Ill.
D., H. & Co.....Donahue, Henneberry & Co., Chicago.
D., M. & Co.....Dodd, Mead & Co.. Chicago.
E. & L.....Estes & Lauriat, Boston.
E. P. Co.....Educational Pub. Co., Chicago.
G. & Co.....Ginn & Co., Chicago.
G. B. Co.....Globe Book Co., New York City.
H., M. & Co.....Houghton, Mifflin & Co., Chicago.
H. & Bros.....Harper & Bros., Chicago.
H. & N.....Hinds & Noble, N. Y. City.
H. & Co.....D. C. Heath & Co., Chicago.
H. R. P.....H. R. Pattengill, Lansing. Mich.
H. T. C. & Co.....H. T. Coates & Co., Philadelphia, Pa.
I., B. & Co.....Ivison, Blakeman & Co., Chicago.
J. & Co.....George W. Jacobs & Co., Philadelphia, Pa.
L. Co.....D. Lothrop Co., Boston.
L., G. & Co.....Longman, Green & Co., New York City.
L., S. & S.....Leach, Shewell & Sanborn, Chicago.
L. & S.....Lee & Shephard, Boston.
Macm. Co.....The Macmillan Co., Chicago.
McC. & Co.....A. C. McClurg & Co., Chicago.
M. Co.....The Morse Co., Chicago.
M. Bros.....March Bros., Lebanon, Ohio.
M., M. & Co.....Maynard, Merrill & Co., Chicago.
O. B. P. Co.....Orville Brewer Pub. Co., Chicago
P. Sons.....G. P. Putnam's Sons, New York City.
Penn. Co.....Penn. Pub. Co., Philadelphia, Pa.
P. E. Co.....Prang Ed. Co., Chicago.
P. S. P. Co.....Public School Pub. Co., Bloomington, Ill.
R. Bros.....Roberts Bros., Boston.
R. & M.....Rand & McNally, Chicago.
S., B. & Co.....Silver, Burdett & Co., Chicaso.
S. Sons.....Chas. Scribner's Sons, Chicago.
U. P. Co.....University Pub. Co., New York City.
W. Co.....The Werner School Book Co., Chicago.
W. & R. Co.....Whitaker & Ray Co., San Francisco.
W. P. Co.....Westland Publishing Co., Olympia, Wash.

TABULATED COURSE OF STUDY FOR PRIMARY AND GRAMMAR GRADES.

Grade.	*Nature and Science.*	*History and Civics.*	*Arithmetic.*	*Reading.*	*Spelling.*	*Language.*	*Writing.*	*Art.* †
FIRST.	Oral instruction as per manual.	Oral instruction as per manual.	Optional.	The adopted text, with supplementary work.	Optional. Taught with other subjects.	With other subjects. Daily drill in written expressions. Memorize selections.	Natural System, book I.	Drawing, clay modeling, paper cutting, and picture study.
SECOND.	Same as before.	Same as before.	Optional.	The adopted text, with supplementary work.	Optional. Taught with other subjects.	With other subjects. Daily drill in written expressions. Memorize selections.	Natural System, book II.	Same as before.
THIRD.	Same as before.	Story of Kablu and Darius, as per manual.	Walsh's Primary Arithmetic in hands of teacher.	The adopted text, with supplementary work.	Optional. Taught with other subjects.	With other subjects. Daily drill in written expressions. Memorize selections.	Natural System, book III.	Same as before.
FOURTH.	Same as before.	Story of Cleon the Greek boy, as per manual.	Walsh's Primary Arithmetic.	The adopted text, with supplementary work.	Graded Speller, part I.	Adopted text to page 75. Memorizing selections, compositions and recitations.	Natural System, book IV.	Same as before.
FIFTH.	Text in geography.	Story of Horatius, the Roman boy, as per manual. Mowry's Primary History.	Walsh's Grammar School Arithmetic, to chapter VIII.	The adopted text, with supplementary work.	Graded Speller, part II.	Adopted text completed. Memorize selections, compositions and recitations.	St. John's Writing Tablet	Drawing and picture study.
SIXTH.	Text in geography.	Story of Wulf, Gilbert, etc.. as per manual. Civics, "Why We Vote."	Walsh's Grammar School Arithmetic, to chapter X.	The adopted text, with supplementary work.	Graded Speller, part III.	One Book Course, to page 151.	St. John's Writing Tablet.	Drawing and picture study.
SEVENTH.	Text in hygiene.	U. S. History, to the constitutional period.	Walsh's Grammar School Arithmetic, to chapter XIII.*	Optional, English classics, history, etc.	Graded Speller, part IV.	One Book Course, to page 237.	St. John's Writing Tablet.	Drawing and picture study.
EIGHTH.	Optional.	U. S. History, completed, and Dole's American Citizen.	Walsh's Grammar School Arithmetic, finished. *	Optional, Classics, history, science, etc.	Graded Speller, part V.	One Book Course, completed.	St. John's Writing Tablet.	Drawing and picture study

* The chapter on geometry may be divided between the seventh and eighth grades.

† The teacher should get some good drawing manual, and teach the subject incidentally with other subjects. GENERAL EXERCISES, as a part of each day's work, should consist of singing, memory gems, descriptions and stories, physical and chemical experiments.

BOOKS REQUIRED FOR EACH SCHOOL YEAR.

(Primary and Grammar Grades.)

	Retail Price to Pupil.
First Year.	
Lights to Literature, Book I	$ 23
Natural System of Writing, Book I	06
Pencil, pen, ink and tablet or practice paper	
Second Year.	
Lights to Literature, Book II	35
Natural System of Writing, Book II	06
Pencil, pen, ink and tablet or practice paper	
Third Year.	
New Century Reader, Book III	22
Natural System of Writing, Book III	06
Pencil, pen, ink and tablet or practice paper	
Fourth Year.	
Graded Spelling Book	20
New Century Reader, Book IV	22
Natural System of Writing, Book IV	06
Primary Arithmetic	30
Elementary Lessons in English	35
Pencil, pen, ink and tablet or practice paper	
Fifth Year.	
Graded Spelling Book	20
New Century Reader, Book V	30
St. John's Analytic Writing Tablet	10
Grammar School Arithmetic	65
Or Part I of the same	30
Elementary Lessons in English	35
New Pacific Geography	80
Mowry's Primary History	60
Sixth Year.	
Graded Spelling Book	20
New Century Reader, Book VI	30
St. John's Analytic Tablet	10
Grammar School Arithmetic	65
Or Part I of the same	30
One Book Course in English	60
New Pacific Geography	80
Elementary Civics—"Why We Vote"	50

SEVENTH YEAR.

Graded Spelling Book	20
St. John's Analytic Writing Tablet	10
Grammar School Arithmetic	65
Or Part II of the same	45
One Book Course in English	60
Graded Lessons in Hygiene	75
New Era U. S. History	80

EIGHTH YEAR.

Graded Spelling Book	20
St. John's Analytic Writing Tablet	10
Grammar School Arithmetic	65
Or Part II of the same	45
One Book Course in English	60
New Era U. S. History	80
Dole's American Citizen	80

SUGGESTED PROGRAM.

FOR RURAL DISTRICT, ONE ROOM SCHOOL.

9:00—Opening exercises, experiments, oral history, music, etc.
9:20—First year reading, language, spelling, etc.
9:30—Second year reading, language, spelling, etc.
9:40—Arithmetic, all grades above the second.
10:30—Recess.
10:40—First and second year reading, language, spelling, etc.
11:00—Sixth year reading.
11:15—Fifth year reading.
11:30—Fourth year reading.
11:45—Third year reading.
12:00—Noon.
1:00—First and second year numbers.
1:15—Grammar and languages, all classes.
2:05—Writing.
2:20—Geography.
2:40—Recess.
2:50—Physiology and hygiene.
3:05—History and Civics.
3:25—Spelling, all classes.
3:55—General exercise.
4:00—Dismissal.

The following may be used more readily by some schools:

9:00—Opening exercises.
9:05—First grade reading.
9:15—Second grade reading.

9:25—Eighth and seventh grades arithmetic.
9:45—Sixth and fifth grades arithmetic.
10:05—Fourth and third grades arithmetic.
10:20—Writing.
10:30—Recess.
10:45—First grade numbers.
10:55—Second grade numbers.
11:05—Sixth grade reading.
11:15—Fifth grade reading.
11:30—Fourth grade reading.
11:45—Third grade reading.
12:00—Noon.

P. M.
1:00—Opening exercises.
1:05—First grade reading, etc.
1:15—Second grade reading, etc.
1:25—Grammar.
1:45—Grammar.
2:00—Language.
2:15—History.
2:30—Recess.
2:45—Hygiene.
3:00—Geography.
3:20—Eighth grade study
3:40—Spelling.
3:50—Spelling.
4:00—Dismiss.

COURSE OF STUDY FOR HIGH SCHOOLS.

FIRST YEAR.

	ENGLISH COURSE.		SCIENTIFIC COURSE.	CLASSICAL COURSE.	BUSINESS COURSE.
FIRST TERM.	Algebra	*4	Same as English Course.	Substitute Latin for option in English Course.	Substitute Stenography and Penmanship for option.
	Physical Geography	4			
	Studies in Literature	4			
	Option	5			
	Drawing, Music, or Rhetorical and Parliamentary Ex.	3			
SECOND TERM.	Algebra	4			
	Physical Geography and Review of Political Geography	4			Stenography and Typewriting.
	Studies in Literature	4			
	Option	5			
	Drawing, Music, or Rhetorical and Parliameniary Ex.	3			

SECOND YEAR.

FIRST TERM.	Plane Geometry	4	Substitute Botany or Zoology or both for option in English Course.	Substitute Latin for option in English Course.	Substitute Stenography and Typewriting for option.
	Rhetoric and English Classics	4			
	European History	4			
	Option	5			
	Drawing, Music and Rhetorical and Parliamentary Ex.	3			
SECOND TERM.	Plane Geometry	4			
	Rhetoric and English Classics	4			
	European History	4			
	Option	5			
	Drawing, Music, or Rhetorical and Parliamentary Ex.	3			

THIRD YEAR.

FIRST TERM.	Advanced Algebra	4	Substitute Physics for option in English Course, and a Modern Language for English History and Literature.	Substitute Latin for option and Greek or Modern Language for United States History and Civil Government.	Substitute Bookkeeping for option.
	Rhetoric and English Classics	4			
	English History and Literature.	4			
	Option	5			
	Miscellaneous	3			
SECOND TERM.	Higher Arithmetic	5			
	Rhetoric and English Classics	4			
	English History and Literature,	4			
	Option	5			
	Miscellaneous	2			

FOURTH YEAR.

FIRST TERM.	Solid Geometry or Option	4	Substitute Chemistry for Physiology and Psychology in English Course, and a Modern Language for Political Economy.	Substitute Latin for Physiology and Psychology, and Greek or Modern Language for Political Economy.	Substitute Business Forms and Customs.
	United States History	4			
	Political Economy	4			
	Physiology and Anatomy	5			
	Miscellaneous	2			
SECOND TERM.	Civil Government	4			
	Political economy	4			Substitute Commercial Law.
	Psychology	4			
	Review	5			
	Miscellaneous	2			

*Recitations per week, of not less than forty minutes each period. A full year's work shall consist of not less than thirty-six weeks of twenty periods each, or 720 recitations.

Texts in physics, chemistry, botany, zoology, political economy, and psychology, are left to the option of the districts, because of the diversity of equipment for laboratory and library work. The Board of Higher Education will pass upon the work of each high school in placing it upon the accredited list for entrance to the state institutions.

COURSE IN ENGLISH.

NINTH YEAR.

Require **Skinner's "Studies in Literature,"** with composition and essays.

TENTH YEAR.

Text, **Herrick and Damon's "Composition and Rhetoric" for schools, part I.**

Classics to be read, "The Last of the Mohicans," "The House of the Seven Gables," "Vision of Sir Launfal."

See "Suggested Course of Study," by Scott, Foresman & Co., in which page references are to the Lake edition of the book under consideration, and cross references are made to the Rhetoric.

ELEVENTH YEAR.

Text, **part II of the Rhetoric.**

Classics to be read, "Ivanhoe," "Merchant of Venice," "Homer's Iliad," Books I, VI, XXII, XXIV; "Milton and Addison." See "Suggested Course of Study."

A text in English Literature. See "Suggested Course of Study," pages 26–32.

Each High School should purchase for the library one or more copies of the classics to be read in the English course.

TWELFTH YEAR.

The work of the previous year may be continued. See "Suggested Course in English."

For the purpose of indicating more fully the manner in which the teaching of English should be done, the following detailed questions and directions for the study of Sir Launfal are taken from the Tacoma Manual of Instruction:

Questions and Directions for the Study of Sir Launfal.

Read the poem for the purpose of telling the story.
What is its underlying thought?
In the message it brings from the poet to the world?
What is the passage in which it is most plainly stated?
Where is it implied in the prelude to part I?
What has the description of the organist to do with the poems?
Why build a bridge?
Why from dreamland?
Is this true musically?
What are the auroral flashes?
Name the figures in the passage.
Why speak of the heaven around our infancy?
What is the allusion to Sinai?
Why introduced here?
At what time was the poem written?
What does he mean by cringing and plotting?
Is there any national sin to which he alludes?
What rebuke does he mention in the next stanza? Explain each.
Why the Druid wood?
What is the thought of the next stanza?
What connection has it with the thought of this poem?
What contrast of feeling in the poet's mind is indicated in his manner of treatment?
These three stanzas form what part of the introduction?
Is the first stanza more or less general in comparison with these three?

The description of the day in June has what value in the poem? What is the general tone of the poem? Why should it have that tone here? This is June where? What is the comparison in "over it softly her warm ear lays?" What picture does it suggest? What is the figure in the clod, lines 39–42? Explain all the thought in this figure. What is the meaning of startless? What is its usual meaning? The description of the bird has what effect? What contrast is there in it? What underlying truth is hinted at in it? Find the definition of atilt. What effect has the figure of the tide? Is this effect of nature on the feelings a general one? What should you think of the authors sympathy with nature from this description? Name the messenger of spring. How does the breeze tell? Is the comparison of the river and sky a true one? What is meant by the new wine of the year? What in the story is anticipated in the suggestion that it is easy now to be true? True to what? What is the effect of the concluding figures of the description? How does the contrast aid this effect?

Is Sir Launfal's vow a recent or an old one? How do you know? Why ask for his richest mail? What does it imply of his nature and

feelings? How is the sleeping on the rushes consistent with his nature? What is the figure in line 105, line 107? What is the impression given by the brief description in Stanza II? How is the contrast with the castle indicated? What does the churlish castle typify? What does the summer typify? Why? What are the summer pavilions?

What is the drawbridge? Why dropped? Why with a surly clang? Why are just those words used? What is the meaning and derivation of charger? What was meant by maiden knight? What is the purpose of the comparison with the sun's shafts? Find derivation of lightsome. What other words have the same suffix? Is the locust leaf off the tree or still on it? What does the unscarred imply? Are the comparisons in this passage such as were suggested to the young knight in his vision, or such as are suggested to the poet in his narration? What indicates it? Why does the poet use gloom as a verb? Is brimmed more commonly used so? Describe the pitcher plant's cup? What is the effect of the comparison here?

Why darksome gate? Why leper? Why begged with his hand and how? What is the effect of the sight? Why? Should it be so? What does it indicate in the heart? Does the poet intend it to indicate such a feeling? What will show his intention? What is the thought in the leper's reply? Is it elsewhere indicated in the poem? Is it true? Why? What is the thread of the all-sustaining beauty? What indicates it? Why the change in Part II? What is the effect of the contrast? Does the poet make the winter wholly drear? Why not? What are the pleasant features in it? Name the figures in the description of the brook. What words in the description indicate their meaning by sound? What are the lashes of light that trim the stars? Why call them lashes? What figure in the expression Summer delight? What is the meaning and derivation of crypt? How does his wording make the aisles seem long? What are Arabesques, and why so called? What is the figure in "the gladness of heaven?" What effect has the close of this description of winter? Compare the outdoor scene with the indoor. How are they contrasted? In which is the more motion? Why? What figures in lines 211–214? What is the effect of the specific word in the description of the fire? Name some of them. Is this description more forcible or more elegant? Why? What do you think of the beauty of the figures? Are they more beautiful or more forcible?

Why does the poet break a line into lines 227 and 228? What connection have the words with the sound they represent? Why does the carol shape itself into the words "shelterless?" What is the most pathetic touch in the description? Compare the morning descriptions in Parts I. and II. What other contrast is implied? Name the figures in this description. Compare the Sir Launfal of the two

parts. What indicates the outward difference? What the inward? Why is the sign within called the badge of the suffering and the poor? What does his musing indicate? What connection has it with the poem? How does the poet make it seem real? What are the telling details of the picture? Name the figures in the description. What is meant by "the happy camels may reach the spring?" What is the derivation of gruesome? Why rain-blanched? Why white? What is the effect of the description of the leper? Why does the poet wish to make him loathsome? What is the difference in the feeling of Sir Launfal in this part from that in the first? How is it shown? Is there any horror in the leper? Why not? What has worked the change? How? What is the meaning of the leper's look? What is its effect? Who remembered? Why? Why was his heart ashes and dust? How does he show his repentance? Is it the same leper? Why is the food changed? Is it literal or figurative? What is the difference between this scene and that in the earlier part? Why does Sir Launfal muse? What is the meaning of what follows? What is the meaning of the pillar? What is the meaning of the lines 308 and 309? Explain the similes in stanza VIII. What is their effect? What is the explanation of the strange appearance? What does it mean? Commit the lines giving the main thought of the poem. What ends the vision? Does it seem to you to be a natural dream? Give your reasons. Does the poet mean to indicate that it is merely a dream? What is its effect?

What is the stronger mail? Why? What is the sign of the change? How is the contrast emphasized? Where does the poet before allude to the siege of the castle? In what sense has the serf command? Is that right? Is the inward summer shown in the outward life? Commit one of the long descriptions. What are the leading qualities of style in the poem? What aids to elegance do you find? Select two or three of each and commit the lines containing them to memory. What is the real lesson of the poem? How does the opening of the prelude indicate it? Where else does the poet anticipate it? Tell the story of the poem in writing making the underlying truth stand out plainly? What are the most attractive descriptions in the poem? Select the five most beautiful figures? What are the most effective contrasts?

What are the leading characteristics of the poet as seen in this poem? What characteristics do you see in the Biglow papers? What in the Commemoration Ode? Commit to memory the passage not less than ten lines, in the Commemoration Ode, which most pleases you, and be prepared to tell why it pleases you. What has been the influence of Lowell on the age, and what is his position in Literature? Read and interpret his poem of Aladdin.

Write your own comment on the poem of Sir Launfal, treating of its character, style, and purpose and infiuence.

COURSE IN SCIENCE.

PHYSICAL GEOGRAPHY.

The course in science begins with the ninth year, during which **Tarr's Physical Geography, First Book,** is used as a text. Constant reference should be made to other books and periodicals touching upon geography, geology, meteorology, mineralogy, and astronomy.

BOTANY AND ZOOLOGY.

In the tenth year, a full year in botany, or a full year in zoology, or a given year to both subjects together, will meet the requirements. Laboratory work is essential.

PHYSICS.

The study of physics requires a full school year. Laboratory work is essential.

CHEMISTRY.

The subject requires a full year. Laboratory work is essential.

ANATOMY AND PHYSIOLOGY.

The first term of the twelfth year is given to this subject. Laboratory work required.

OTHER SUBJECTS.

Other subjects will be studied, as indicated by the tabulated statement on page——, and by the adopted texts.

Texts Recommended.

Bergen's Botany.
Setchell's Beginners' Botany.
Spaulding's Botany.
Colton's Zoology.
Boyer's Biology.
Avery's School Physics.
Nichol's Outlines of Physics.
Carhart and Chute's Physics.
Colton's Physiology.
Blaisdell's Practical Physiology.
Storer and Lindsay's Manual of Chemistry.
Shepard's Elements of Chemistry.
Remsen's Briefer Course in Chemistry.

OFFICIAL LIST OF TEXT BOOKS

Adopted by the State Board of Education, for the use of the Common Schools of the State of Washington, from Sept. 1, 1900, to Sept. 1, 1905.

BOOKS ADOPTED.	PUBLISHERS.	OLD BOOKS EXCHANGED.*	*Exchange Price.....*	*Wholesale Price in Washington,*	*Retail Prices..*
Primary and Grammar Grades.					
Graded Spelling Book	Westland Pub. Co., Olympia....	Columbia Speller	$0 05	$0 16⅔	$0 20
Lights to Literature, Book One	Rand, McNally & Co., Chicago..	Franklin's New First Reader	10	18	23
" " Book Two	" " " " ..	" " Second Reader	15	27	35
New Century Series, Book Three	" " " " ..	" " Third Reader	09	18	22
" " " Book Four	" " " " ..	" " Third Reader	09	18	22
" " " Book Five	" " " " ..	" " Fourth Reader	11	25	30
" " " Book Six	" " " " ..	" " Fourth Reader	11	25	30
Walsh's Primary Arithmetic	D. C. Heath & Co., Boston	Columbian Elements of Arithmetic	15	27	30
" Grammar School Arithmetic	" " "	" Complete Arithmetic	32	58	65
" " " " Part I	" " "	" " "	15	27	30
" " " " Part II	" " "	" " "	23	40	45
" Primary Teacher's Manual	" " "	.....	.....	.....	15
" Graded School Teacher's Manual	" " "	.....	.....	.....	40
Graded Lessons in Hygiene	Westland Pub. Co., Olympia....	Lessons in Physiology, No. 2	20	60	75
Woodward's Elementary Lessons in English	Woodward, Tiernan & Co., St. Louis	Reed's Introductory Language Work ..	10	28	35
Reed and Kellogg's One Book Course in English	Maynard, Merrill & Co., Chicago,	Reed and Kellogg's One Book Course in English, Washington	23	51	60
New Pacific School Geography	Westland Pub. Co., Olympia....	The Rand-McNally Primary or Grammar School Geography	35	65	80
Dole's American Citizen	D. C. Heath & Co., Boston	.....	.....	72	80
Why We Vote	Westland Pub. Co., Olympia....	Civics for Young Americans	10	41⅔	50
New Era United States History	Eaton & Co., Chicago	Ellis' United States History	30	68	80
Mowry's Primary History	Silver, Burdett & Co., Chicago..	.....	.....	54	60
Natural System of Vertical Writing, Books I-IV, for Primary Grades (First four years of the common school course)	D. C. Heath & Co., Boston	.....	.....	Per Doz. 64	Each. 06
St. John's Analytic Tablet	Westland Pub. Co., Olympia....	.....	.....	96	10

*The pupil has the privilege of exchanging his old book for one of the next higher grade by paying the exchange price.

OFFICIAL LIST OF TEXT BOOKS—Concluded.

BOOKS ADOPTED.	PUBLISHERS.	OLD BOOKS EXCHANGED.*	*Exchange Price*	*Wholesale Price in Washington,*	*Retail Prices.*
High School Grades.					
Wells' Plane Geometry	D. C. Heath & Co., Boston	Phillips & Fisher	$0 37	$0 67	$0 75
" Solid Geometry	" " "	" "	37	67	75
" Plane and Solid Geometry	" " "	" "	62	1 12	1 25
White's School Algebra	American Book Co.			85	1 00
Edgren's French Grammar	D. C. Heath & Co., Boston			1 01	1 12
Super's French Reader	" " "			63	70
French Texts (as per catalogue)	" " "				
Joynes-Meissner's German Grammar	" " "			1 01	1 12
Joynes' German Reader (cloth)	" " "			67	75
German Texts (as per catalogue)	" " "				
Skinner's Studies in Literature	J. H. Miller, Lincoln, Neb.			68	90
Herrick and Damon's Rhetoric	Scott, Foresman & Co,, Chicago,	Genung's	60	85	1 00
Adams' European History	Macmillan & Co., New York		84	1 19	1 40
McLaughlin's History of the American Nation	D. Appleton & Co., New York		80	1 10	1 30
Fiske's Civil Government	Houghton, Mifflin & Co., Boston,			85	1 00
Tarr's Physical Geography	Macmillan & Co., New York			94	1 10
Latin Grammar—Allen & Greenough	Ginn & Co., Chicago			85	95
First Latin Book—Collar and Daniel	" " "			90	1 00
Second Year Book—Greenough D'Ooge & Daniell	" " "	Harper & Tollman's Cæsar	39	1 12	1 25
Cicero—Greenough & Kittridge	" " "			1 26	1 40
Virgil—Greenough & Kittridge	" " "			1 35	1 50

* The pupil has the privilege of exchanging his old book for one of the next higher grade by paying the exchange price.

RULES FOR SALE AND EXCHANGE.

Teachers and dealers shall take into consideration the following conditions under which the above books are adopted and exchanged :

1. The period for exchange of books shall end January 1, 1901.
2. Failure to have on sale, in any incorporated town or city of the state, any adopted book by Sept. 1, 1900, shall render contract forfeitable.
3. All books taken in exchange shall be in fair condition, and shall be in bona fide use by the pupil making the exchange.
4. Free text book districts are supplied at wholesale rates.
5. New books of the kind displaced in the hands of dealers or school districts at the date of this bid will be taken in exchange at wholesale rates, on the basis of dollar's worth for dollar's worth.
6. No book shall be taken in exchange unless it be the lawfully adopted book in use at the date of this bid.

SCHOOL BUILDINGS AND GROUNDS.

"It is conceded in advance, that the first requisite for the success of any school, is a strong, sensible, pure-minded teacher. A dictionary, library, charts, maps, and text-books are also indispensable. But there can be no assured permanency of a good school without a substantial, convenient, attractive and comfortable school house. The moral influence of a school is in a large measure determined by the *physical* condition of the premises. Whether will keep or otherwise, the school house--the school life, makes it mark on the children. Where the aspect of the school grounds is forbidding, it is not surprising that the children go reluctantly to school and are glad to get away as soon as they can. And this condition is the more and more aggravated now that improvement of private houses outruns the improvement of the houses where the children of the community go to school, for children do not fail to note the contrast."

CHARLES A. KENT.

HYGIENE AND HEALTH IN PUBLIC SCHOOLS.

Dr. G. Stanley Hall has said: "What shall it profit a man if he gain the whole world of knowledge and lose his health?" In our public schools, especially in the high schools, many a promising young life has been sacrificed by over-study. The system of marks and medals, now happily disappearing from many of our best schools, has driven many an ambitious boy and girl to an early grave at the point of the pencil, because that system stimulates those very pupils who need no spur and whom the spur injures. More frequently the health of pupils is injured by ignorance of the mest obvious laws of health, or by criminal neglect of those laws, and by the impure air of schoolrooms. Unsuitable furniture which cramps and distorts the growing bodies of children, and poor light which impairs the sight, have also a long account to settle with children thus ruined for life.

The evils of unsanitary school houses have attracted most attention in the crowded schoolrooms of cities, but these evils are not confined to densely populated places. They appear equally in the rural districts, aud they are less known only because the cases of injury are scattered, and the statistics are less easily obtained.

The vigorous country boy and girl may for a time resist the evils of a schoolroom, alternately too hot and too cold; of drafts of cold air in winter through cracks in the floor and poorly-built walls; of outhouses too filthy for use and sources of moral defilement; of seats and desks, built for cheapness and not for comfort, and more racks for torture than like a proper resting place for the growing bodies of little boys and girls. But however much the injury may be concealed, the deadly

work goes on in many a country school. Take a single instance. Many a man has suffered for years from hemorrhoids brought on by ignorance or neglect in childhood; neglect, because proper accommodations were not provided or not properly cared for at the schoolhouse; ignorance, because the school gave no instructions in hygiene—not the technical hygiene suitable for physicans, but the obvious, ordinary hygiene that relates to clothing, proper bathing, eating, and the excretions.

Physiology is now required by law to be taught in the schools of nearly all the states. As too frequently taught, it concerns itself about the chemical effects of certain substances upon various parts or processes of the body. Such a treatment of the subject is too abstruse for children in the schools, it goes beyond their knowledge and their experience. They need to be taught the effeet of green apples upon the stomach before they are taught the effect of alcohol upon the brain. We ought to learn wisdom from the concrete teaching of nature about eating green apples in her monitory pains. People mean well when they teach the evil effect of alcohol to little boys and girls who do not know what alcohol is. It would be better to teach these children the good effect of wholesome food and drink, and especially to teach them that the whole alimentary canal should be kept in healthy, regular, and daily movement throughout, and to teach this and all that relates to the necessary bodily functions with delicacy and propriety, and without any squeamishness. Is any teacher too delicate, cultured, and refined a lady or gentleman to give this instruction concerning the bodies of the children? Then let them be relegated to the land of spirits, to teach where the mortal coil has been shuffled off. It is high time to inaugurate a campaign of hygiene, and not the least important branch of child study is the study of their bodies, and how those bodies may be made in school to grow strong, robust, healthy, natural, at ease—"the temple of the living God."

In making the many advancements in education in recent years the pedagogical literature of the past three hundred years or more has been ransacked, and the educational philosophy of many eminent and venerable teachers has been exploited to constitute the new education—Comenius, Pestalozzi, Froebel, Herbart, and the rest; it is worth while now to bring to the front the maxim, "Mens sans in corpore sano," and to found an educational philosophy on that. Already we have physiological psychology which seeks to trace mental phenomena through a study of the brain, and missionaries are now learning to convert the heathen by making their bodies comfortable without their eating the missionary. Benevolence now seeks to raise humanity, both intellectually and morally, by first improving men physically. Let the schools follow the lead of philosophy and of religion in this regard.

It is well known that no child can learn well or grow mentally when in bodily discomfort. Dullness, uneasiness, and consequent disorder in

a school, are directly traceable to vitiated air. If the body is numb with cold, if the feet are damp and chilled, the mind becomes stupid; and the sweltering heat of a badly ventilated schoolroom, the uneasiness of an over-loaded stomach, of constipation, and of uncomfortable clothing, will produce the same result. Moreover, an abnormal condition of the body is often the source of immorality. We blame the first Adam too much; the real Adam is nearer home, and of this generation and every generation that neglects the laws of health. The outbuildings of ill-governed schools with ill-taught children sometimes give evidence of fearful demoralization, and the demoralization is contagious, like a plague.

An important part of school hygiene, then, relates to the lavatories or water-closets. This is not the only, nor perhaps the most important part of school hygiene, but it needs emphasis most at present, because it is nearly always neglected. In rural districts the outhouse is generally located in a remote part of the grounds, where its offensiveness may not interfere with the school, and it is the prey of tramps and bad boys who delight in defiling it, The closet should adjoin the school house, and be accessible through the house only. This location would compel its being kept inoffensive, and make it easy to do so. It should then be used by every child with the same freedom as at home in a well-regulated family. And the child be taught in school to respect his body in every part and in all its functions—that nothing about it is defiling unless he himself makes it so; and that, while we are animals, we should be rational animals, and not brutes. Such teaching should not be indelicate nor obtrusive; but it is important, because respect for the body is at the foundation of self-respect and true manliness. This special teaching of hygiene has often been neglected through a false modesty which is highly indelicate, and which is itself the evidence of an impure mind.

For health, for comfort, and for intellectual and moral well-being, the school house should be well-constructed and suited to its use. It should stand in the middle of the grounds, high, well-drained, and ornamented with trees and shrubs. The well should be so located as to supply pure water. The architecture should be simple and show a refined taste, for the schoolhouse is an educator. It should be as convenient and as well-built as the best homes, in order that the children of the well-to-do may not despise it, and in order that the children of the poor may see how the best people live. The school house will thus become an inspirer in the young to higher living, for education is more than learning from books. It is a training also in how to live.

Churches are built as an example of noble architecture, to be an object lesson leading upward to a higher life. They are usually grander than the houses of the worshipers, and the poorest man in the congregation has an ownership in them. Municipal and state buildings often

display, or are meant to display, the community's ideal of a home for itself. And so the school house should exhibit the taste and to some extent the aspiration of the neighborhood. It should be a little better than the best dwelling-house.

REPORT OF THE COMMITTEE OF TWELVE.

BUILDING SITES.

1. They should be above the water level of the surrounding area, to insure a dry basement and to guard against rheumatism, ague, diphtheria, and other diseases closely related to dampness and defective sewerage.

2. They should have sandy or gravelly soil, as such soil will be warmer than clay, and will not hold moisture.

3. They should not be near marshes or standing pools of stagnant water.

4. They should not be near any manufacturing establishment from which may come offensive and poisonous refuse.

5. They should not be near the noise of factory, railway, or busy streets.

6. They should be well exposed to the sun, if possible sloping to the south.

7. They should be surrounded by ample grounds, ornamented with shrubs, trees, walks and flowers.

8. They should have convenient play-grounds for exercise, out-door instruction, study of pupils and for general help in discipline.

SIZE OF THE SCHOOLROOM.

1. About 10 square feet of floor space should be given to each pupil.

2. The length and breadth of the room, to make the best use of the space, should be in the ratio of 6:5; and the height should not be less than 10 feet nor more than 15 feet.

3. If the attendance is more than 40 pupils, a recitation room should be provided, and two teachers employed.

4. The house should be large enough to provide for well ventilated closets for the clothing and lunch baskets of pupils.

5. It should provide also a room for the district library, and the apparatus not used constantly in the recitation room.

EQUIPMENT OF THE SCHOOLROOM.

1. Single desks are the best, and should be furnished unless at a loss of good double desks already owned by the district.

2. Blackboard space should be provided to enable ample illustration of the subjects by the teacher.

3. Erasers, pointers, and rulers are essential to the best use of the blackboard.

4. A good reading chart is convenient to teach the beginners in reading and spelling, but it is not essential.

5. An International Dictionary, or several small dictionaries, should be supplied by the district.

6. A cabinet of materials collected by the pupils, should be a part of the equipment of each school house, to assist in the proper study of nature and geography.

7. A few good outline maps should be on the walls.

8. A set of scales and weights is necessary for the best study of denominate numbers and the metric system.

9. A library is the center of great inspiration to the school and to the whole community, and should be found in every school house.

10. It is the duty of a teacher to create sentiment in the community for the complete equipment of the school room, and to organize entertainments, raise subscriptions, or otherwise raise funds for the purpose.

11. Every school should be supplied with a wash basin, soap and towels.

12. At least one thermometer should be in every school room.

The following plans for school buildings are presented by the courtesy of Chas. A. Kent, ex-county superintendent, Oskaloosa, Iowa. Mr. Kent has made a special study of the "modern school house" and has become an authority on the subject.

For additional information see

"School Sanitation and Decoration," D. C. Heath & Co.
"Recent School Architecture," issued by the Department of Public Instruction, Albany, New York.
Any local architect's plans.

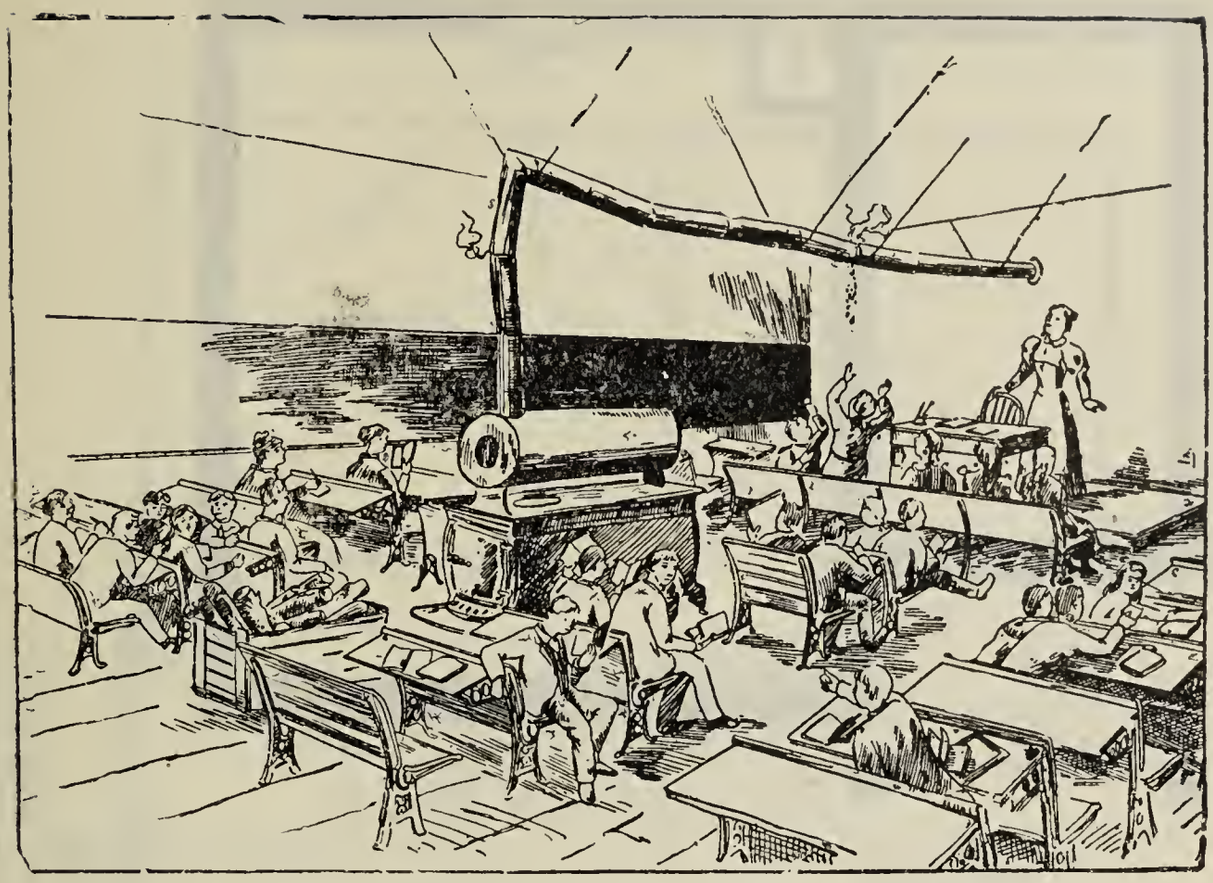


FIG. 1.—THE BADLY ARRANGED SCHOOL ROOM.

Disorder, idleness, mischief, discomfort, ill temper, disease—due to unfavorable physical conditions.

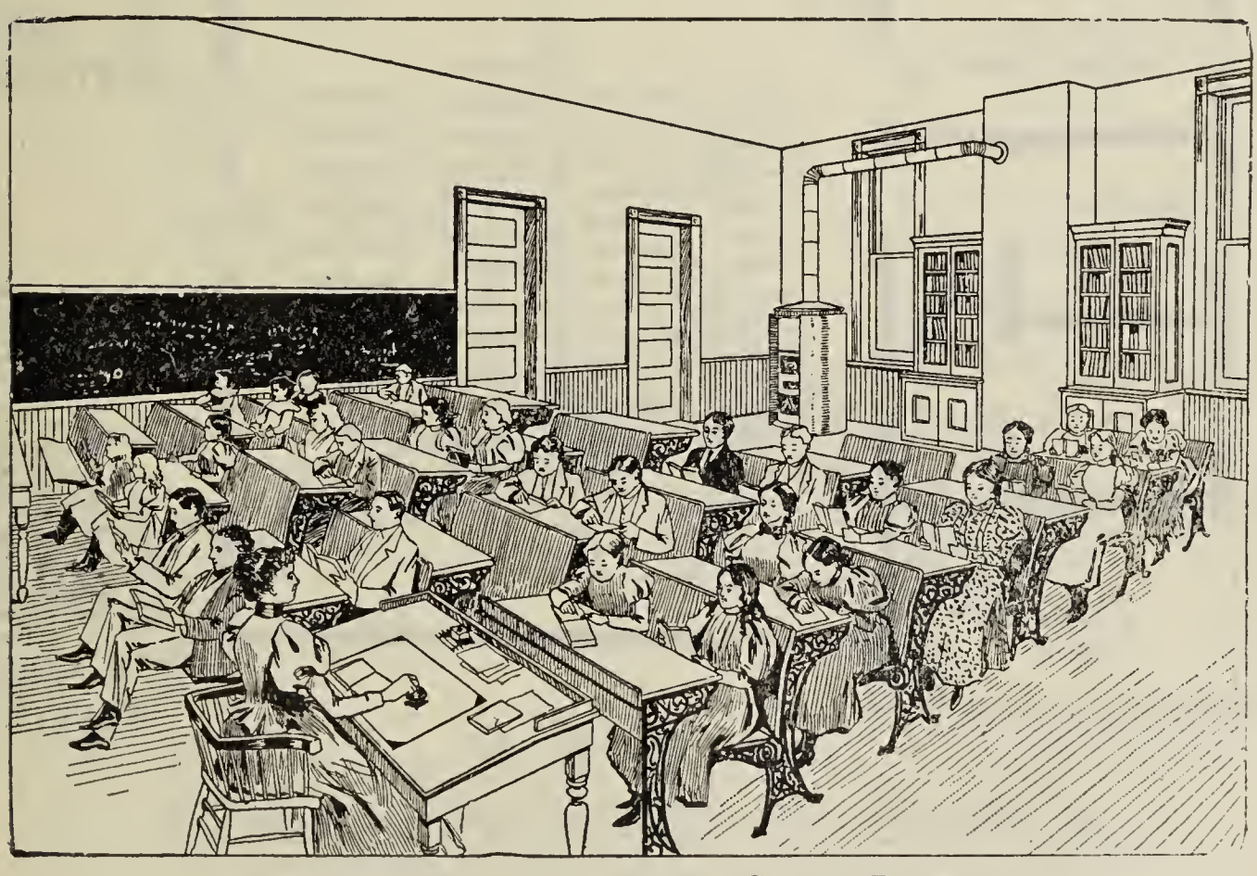
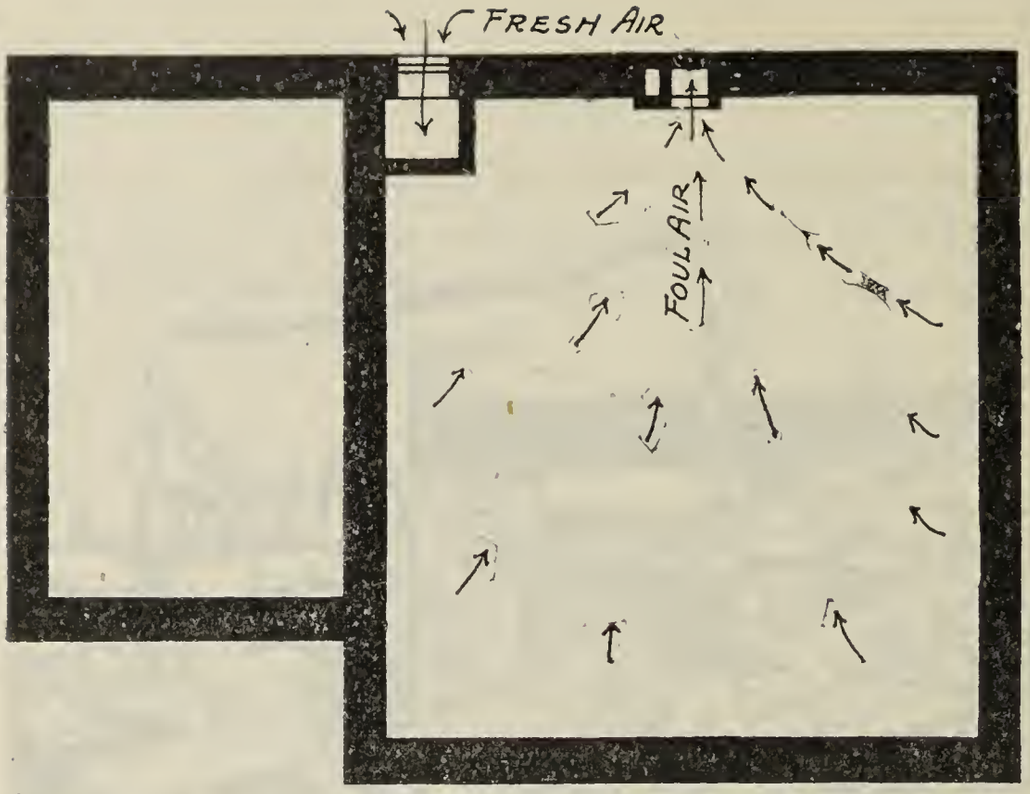
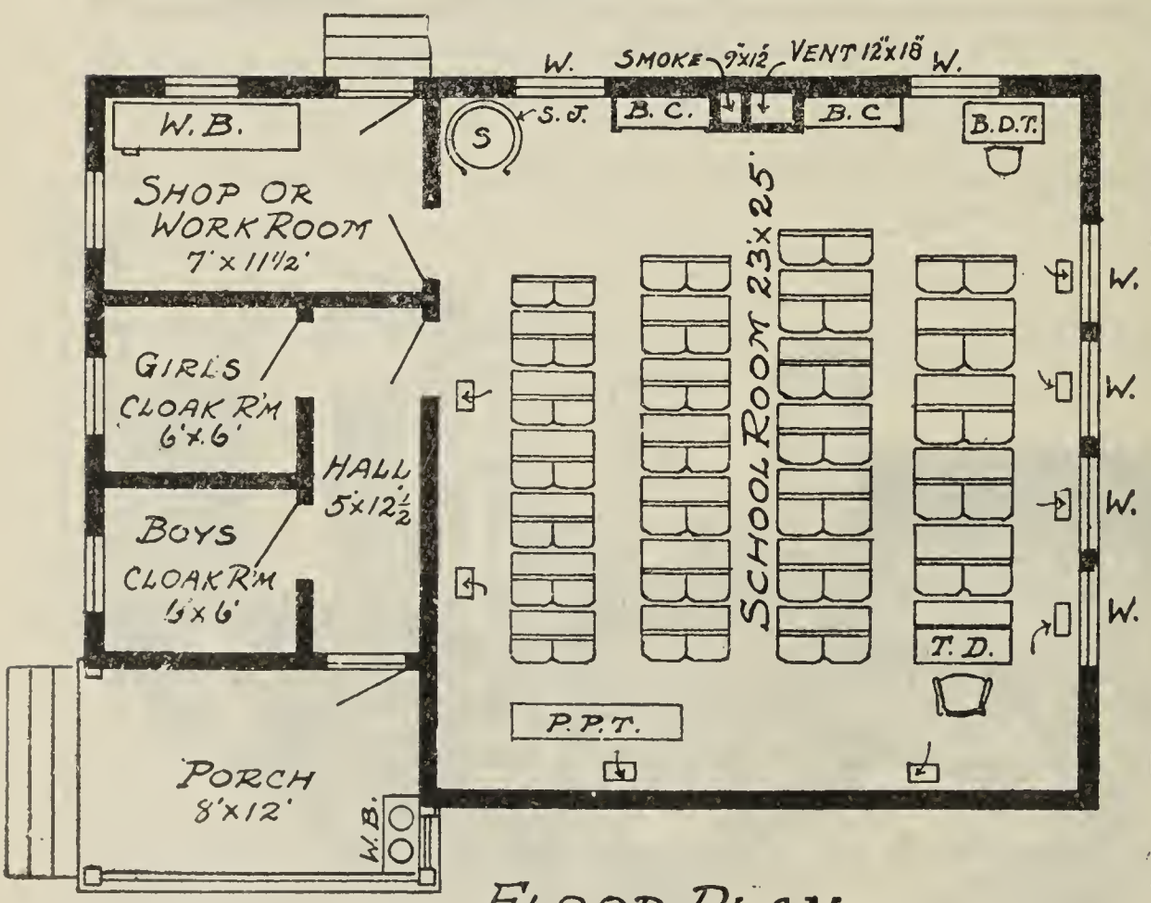


FIG. 2.—THE WELL ARRANGED SCHOOL ROOM.

Good order and industrious habits fostered; comfort and health promoted—by favorable physical conditions.



FOUNDATION PLAN

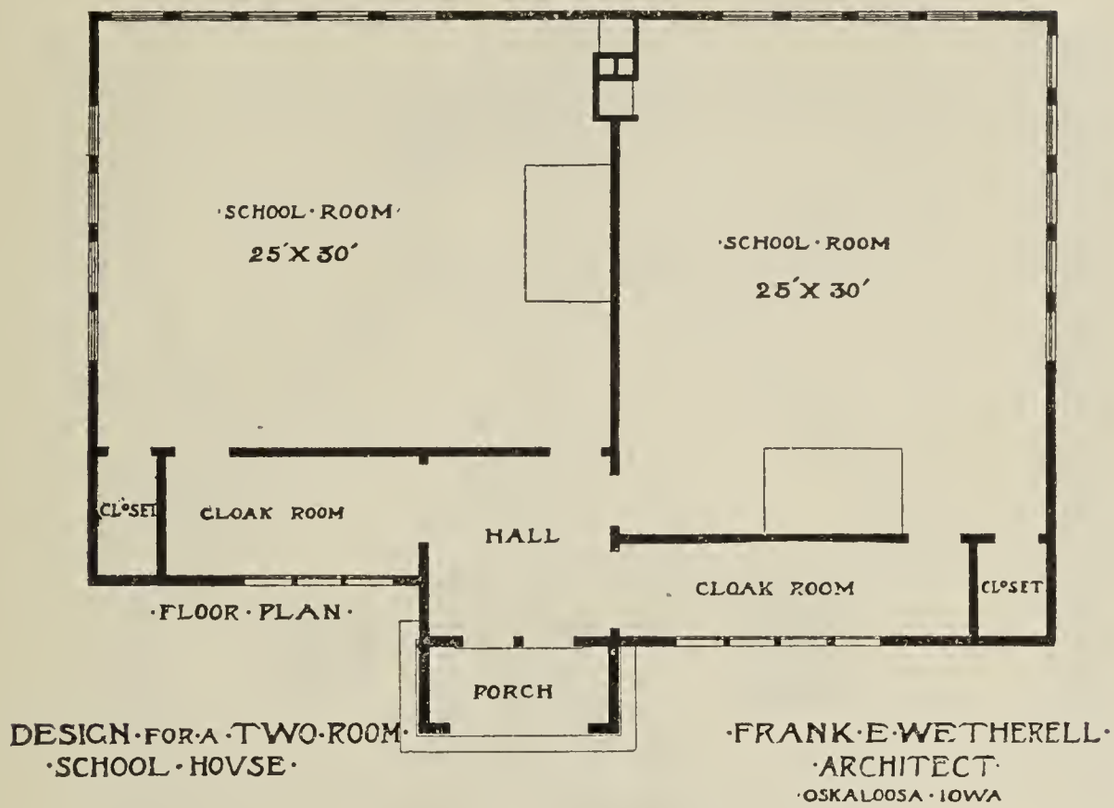


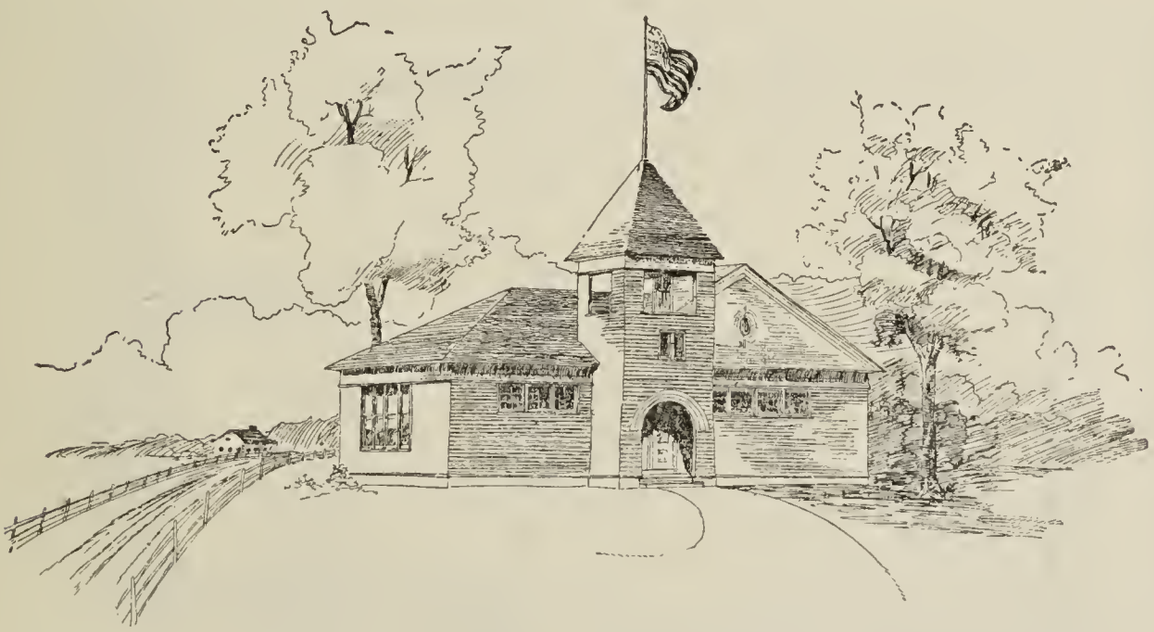
FLOOR PLAN

B.D.T. - Book & Dictionary Table
S. - Stove
S.J. - Stove Jacket
W.B. - Water Buckets
Arrows - Floor Registers

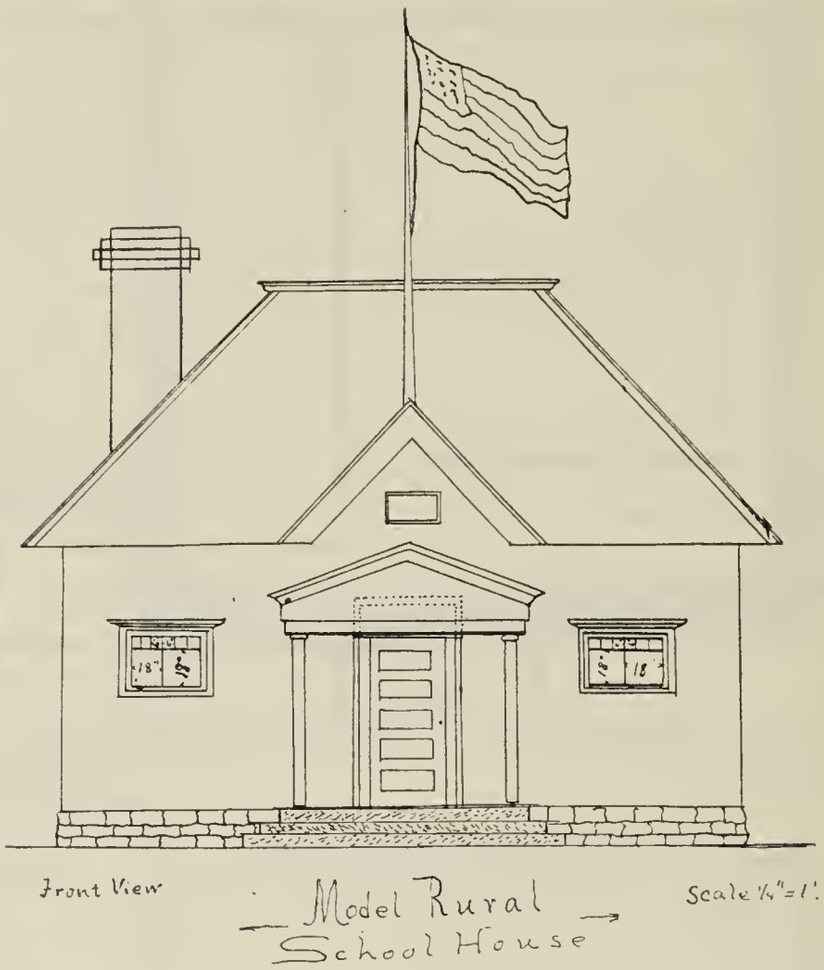
D. - Door
W. - Windows
B.C. - Book Case
T.D. - Teacher's Desk
P.P.T. - Primary Pupils' Table

A PRACTICAL AND ECONOMICAL ONE ROOM SCHOOL HOUSE FOR A RURAL SCHOOL

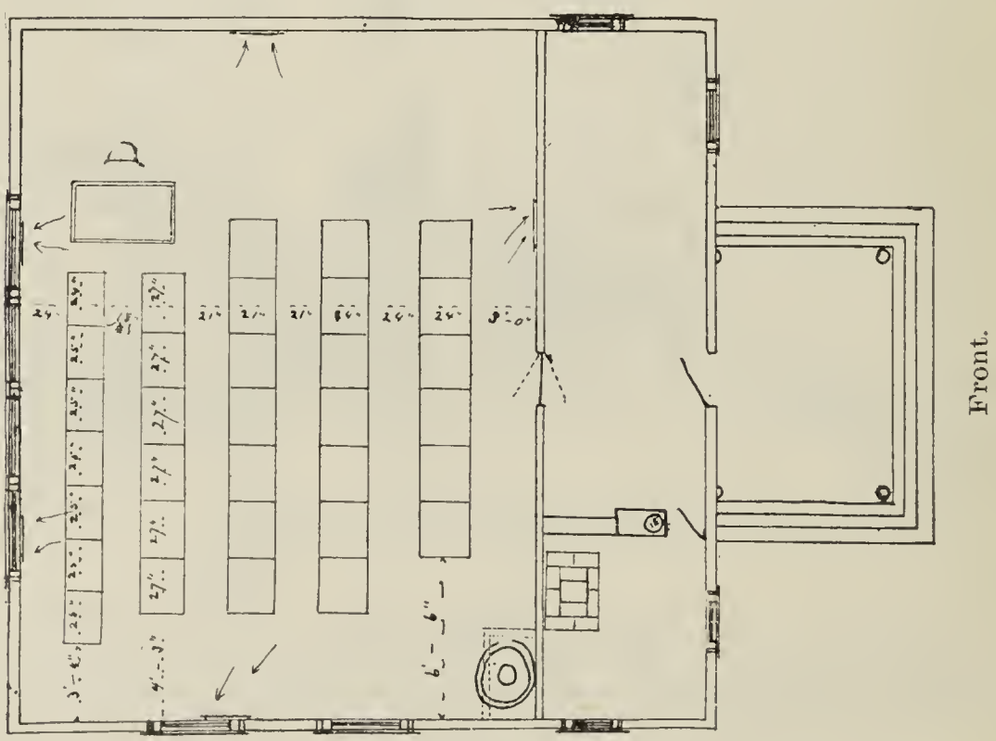




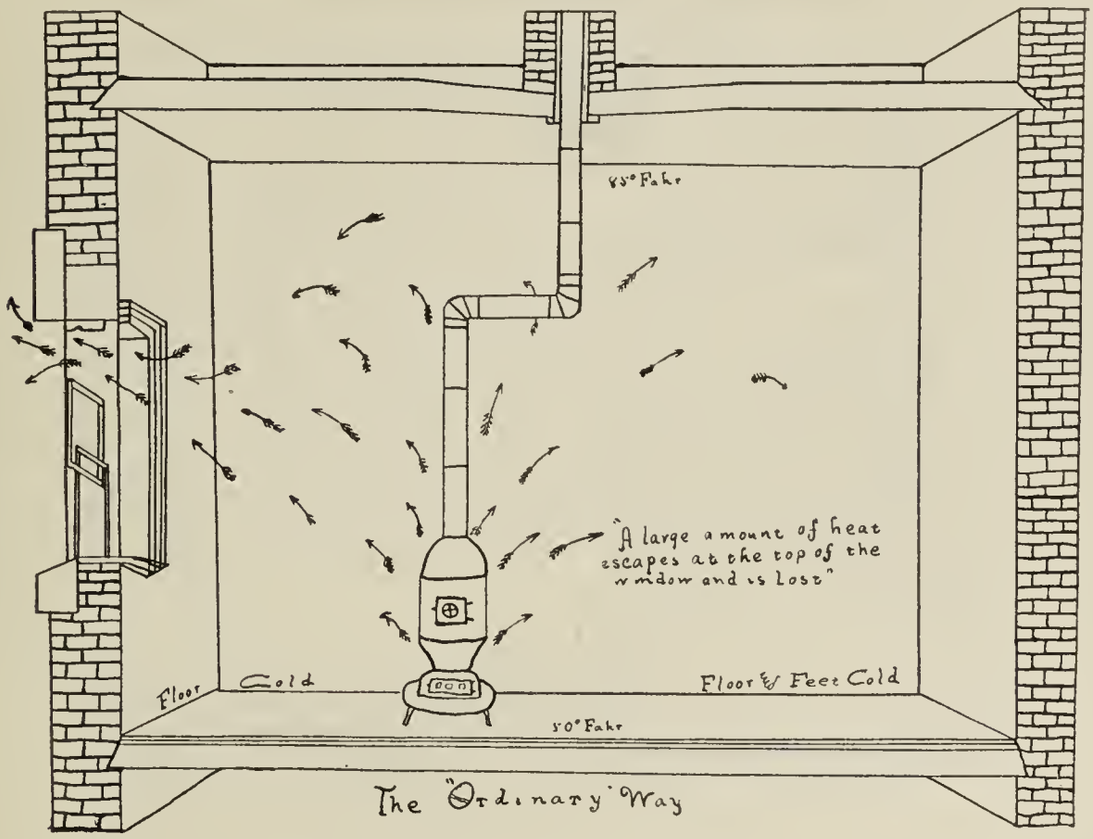
This two-room building can be built for about $1400. It has the advantage of a hall 10½ x 10½ besides the cloak rooms, which are 6½ x 15 and 5½ x 20. The class rooms are 25 x 30 and have seating capacity for about 50 pupils each. This building, as well as the others, has provision made for proper ventilation and heating by modern methods.



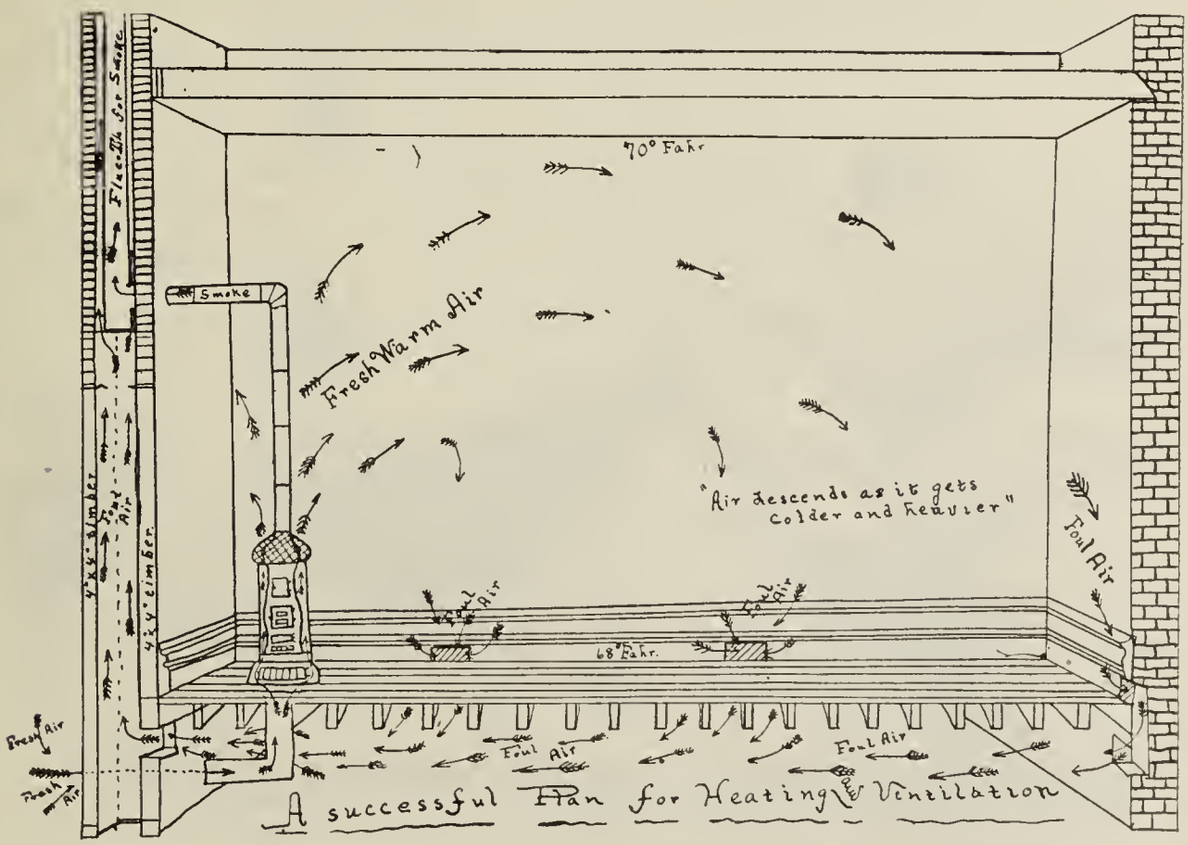
A house that can be built for $600 or less. Charles A. Kent, architect, Oskaloosa, Iowa.



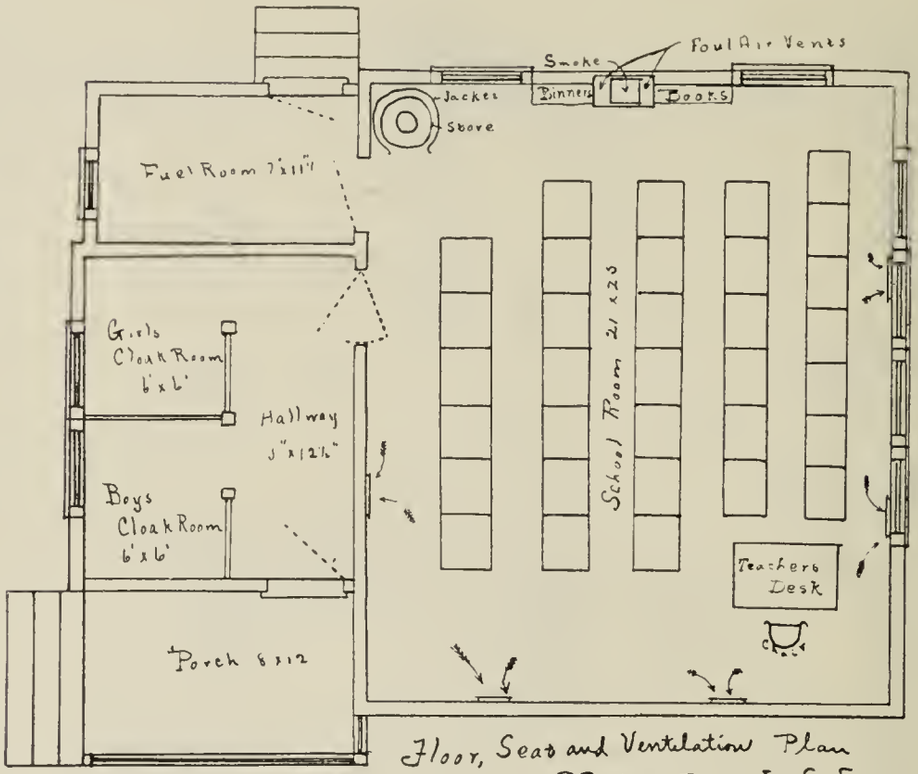
Floor and seating plan.



The "Ordinary" Way



A successful Plan for Heating & Ventilation



Floor, Seats and Ventelation Plan
Model Rural School

MORALS AND MANNERS IN SCHOOL LIFE.

The school should train pupils in habits of courtesy and good manners. "Good will to all men" is a good back-ground for character. But, insomuch as a polished rascal is more dangerous than an ignorant one, it should be the first duty of the teacher to develop morality in the character, and then to cultivate the most kindly manifestation of it in the genuine effort to make life pleasant for others. Morals and manners thus go hand in hand, taught both by precept and example. Do not dull a truth by formal moralizing, but at all times bring out the worth of courage and honor and industry. LIVE THE GOLDEN RULE.

For assistance to the teacher refer to

Gow's "Morals and Manners."
Wiggins' "Lessons on Manners."
White's "School Management."
Dewey's "Home and School Stories."
Any text on ethics.

SUGGESTED TOPICS ON CONDUCT.

HOME LIFE.— Treatment of parents, brothers and sisters, servants, and guests.

SCHOOL LIFE.— Entering and leaving the room, laughing at others, conduct to the teacher, treatment of visitors, use of school property.

WHEN VISITING.—Proper greetings, staring, whispering, attention to conversation, agreeable manners to all.

WHEN AT CHURCH.— Punctuality, courtesy to strangers, whispering during service, attention to the service, observance of formal ceremony, leaving before service closes.

AT THE TABLE.— Promptness at meals, patience in waiting, beginning to eat, use of napkin, asking for food, conversation, leaving the table, observing the manners of polite people.

IN PUBLIC PLACES.—Sitting, fault-finding, gazing, noisy conduct, saluting friends, impertinent inquiries, obstructing walks, eating in the street, throwing things on the walk.

THE USE OF ALCOHOLIC DRINKS AND NARCOTICS.

The effect of the use of stimulants and narcotics must be systematically taught in every grade. Hutchinson's Physiology No. 1. furnishes abundant material for this work, as well as other primary texts. See also teacher's edition of the adopted text.

GOOD CITIZENSHIP.

SEC. 58, (of the Code of Public Instruction.) It shall be the duty of all teachers to endeavor to impress on the minds of their pupils the principles of morality, truth, justice, temperance and patriotism; to teach them to avoid idleness, profanity and falsehood; to instruct them in the principles of free government, and to train them up to the true comprehension of the rights, duty and dignity of American citizenship.

MERCY TEACHING.

SEC. 65, (of the Code of Public Instruction.) Attention must be given during the entire course to the cultivation of manners, to the laws of health, physical exercise, ventilation and temperature of the school room, and not less than ten minutes each week must be devoted to the SYSTEMATIC TEACHING OF KINDNESS, NOT ONLY TO OUR DOMESTIC ANIMALS, BUT TO ALL LIVING CREATURES.

USE OF TOBACCO AND ALCOHOL.

The use of tobacco in any form or place by a teacher is discountenanced, and the use of alcoholic stimulants in any form or place, as a beverage, IS PROHIBITED. The use of tobacco or any other narcotic on the school premises by a teacher SHALL WORK A FORFEITURE OF HIS CERTIFICATE. (Rule IX by State Board of Education.)

ARBOR AND BIRD DAY.

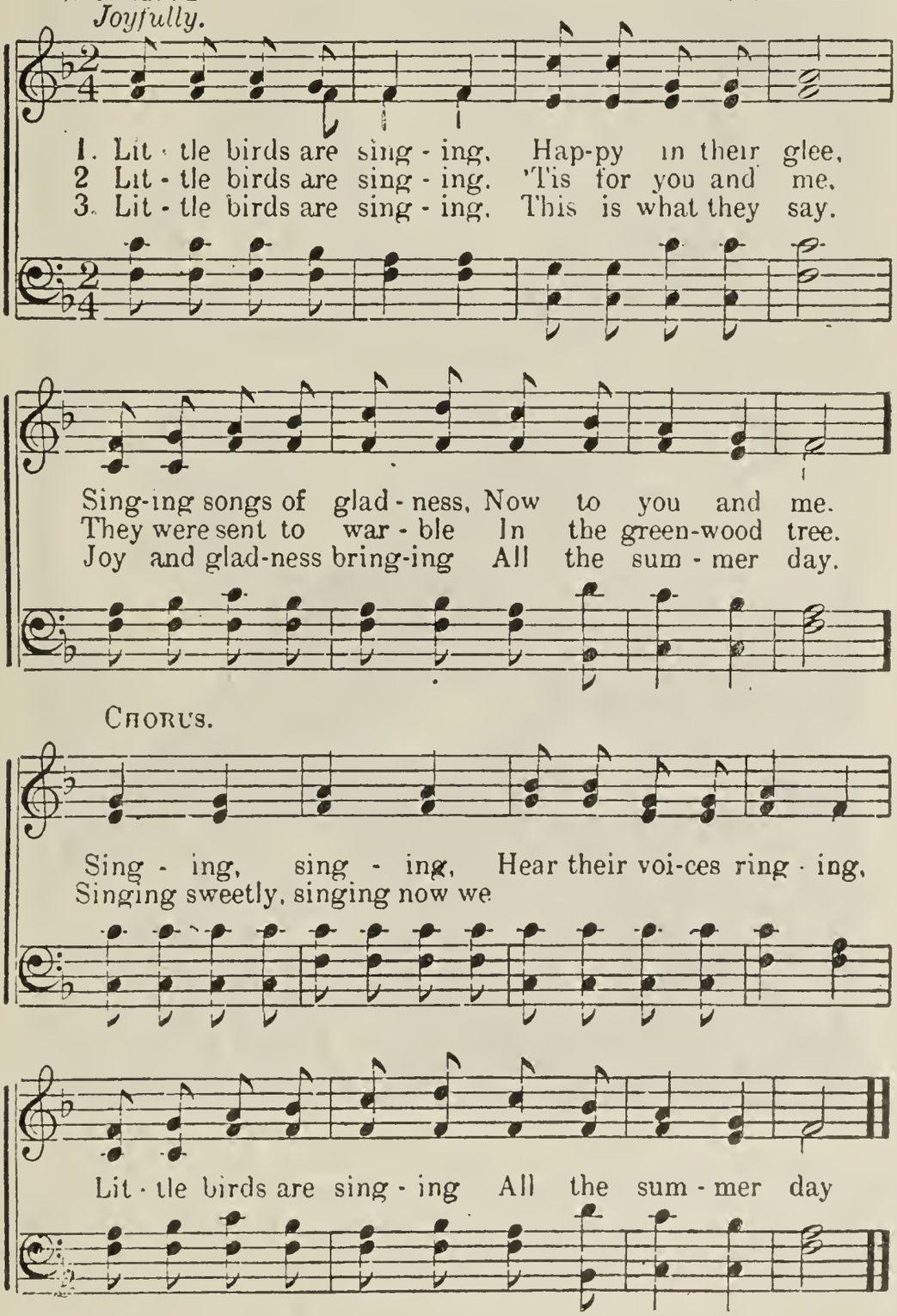
Children should be impressed with the thought that the good and the beautiful are inseparably connected in animated nature. One feature of moral education relates to the observation of Arbor and Bird Days in the schools. Sometimes these ideas are combined in one program. For reference see

Manuals issued by state department, 1898.
Biennial Report Superintendent Public Instruction, 1898.
Current School Journals.

BIRD SONG.

R. S. Hanna. R. S. Hanna.

Joyfully.



[This cut is used by the kind permission of Whitaker, Ray & Co., of San Francisco, and is taken from "North-West Nature Studies," by Herbert Bashford, State Librarian.]

BLUEBIRD. BLUEJAY.

SWALLOW. ROBIN.

[This cut is used by the kind permission of Whitaker, Ray & Co., of San Francisco, and is taken from "North-West Nature Studies," by Herbert Bashford, State Librarian.]

PATRIOTIC MEMORIAL DAYS.

We love our country because we have homes here. We follow the flag into battle to protect our country from dishonor, just as we would fight to protect our homes from destruction by enemies. Our schools will be patriotic just in proportion to the spirit of HOME that pervades the school room. By making all your friends to feel at home with you in your work you will show that the schools belong to the people, and upon them depends the safety of the people.

On each day observed by patriotic exercises, some such letter as the following should be sent to all the patrons of the district, and to all others who will encourage your efforts:

..... *Washington*, ..., *19*...

Mr. (*or Mrs.*).....,

(*Post Office*), *Washington:*

MY DEAR MR..... ..., The pupils of our school very much desire your presence at ..... exercises to be held at the school house on ..... The program will consist of reading, speaking and singing, by pupils and visitors, and the boys and girls wish the encouragement of your presence and co-operation in their work for HOME and COUNTRY.

Very truly,

.....
.....
..... } *Committee.*

The form can be changed to suit the occasion, and the schools may thus be brought in touch with the homes more closely than ever before.

Appropriate programs should be prepared for Thanksgiving, Christmas, (Capture of Trenton), February 12, February 22, May 30, July 4, and anniversary days of our great authors and statesmen. For assistance refer to

"Patriotic Memorial Days," (issued by State Dep't).

"Columbian Selections."

Current School Journals.

FLAG SALUTE.

[Adopted by the National Societies G. A. R. and W. R. C.]

SALUTE.—We Give Our Hands, Our Heads and Our Hearts to God and Our Country. One Country, One Language, One Flag.

Signals—

The pupils having been assembled and being seated, and the flag borne by the standard bearer being in front of school, at the signal (either by a chord struck on the piano or, in the absence of a piano, from a bell) each scholar seizes the seat preparatory to rising.

Second Signal—The whole school rises quickly, as one person, each one standing erect and alert.

Third Signal—The right arm is extended, pointing directly at the flag; as the flag-bearer should be on the platform where all can see the colors, the extended arm will be slightly raised above a horizontal line. The pupils will say, "We give our HANDS,"

Fourth Signal—The forearm is bent so as to touch the forehead lightly with the tip of the fingers of the right hand. The motion should be quick, but graceful, the elbow being kept down and not allowed to "stick out" to the right. As the fingers touch the forehead, each pupil will exclaim in a clear voice, "our HEADS" (emphasizing the word "HEADS").

Fifth Signal—The right hand is carried quickly to the left side and placed flat over the heart with the words, "and our HEARTS!" (*after* the movement has been made).

Sixth Signal—The right hand is allowed to fall quickly, but easily to the right side; as soon as the motion is accomplished, all will say, "to God and Our Country!"

Seventh Signal—Each pupil still standing erect, but without moving, will exclaim, "One Country!" (emphasis on Country).

Eighth Signal—The pupils still standing motionless, will exclaim, "One Language!" (emphasis on Language).

Ninth Signal—The right arm is suddenly extended to its full length, the hand pointing to the flag, the body inclining slightly forward, supported by the right foot slightly advanced. "The attitude should be that of INTENSE EARNESTNESS. THE PUPIL REACHES, AS IT WERE, TOWARD THE FLAG, at the same time exclaiming with great force, "One Flag!"

TENTH SIGNAL—The right arm is dropped to the side and the position of attention recovered.

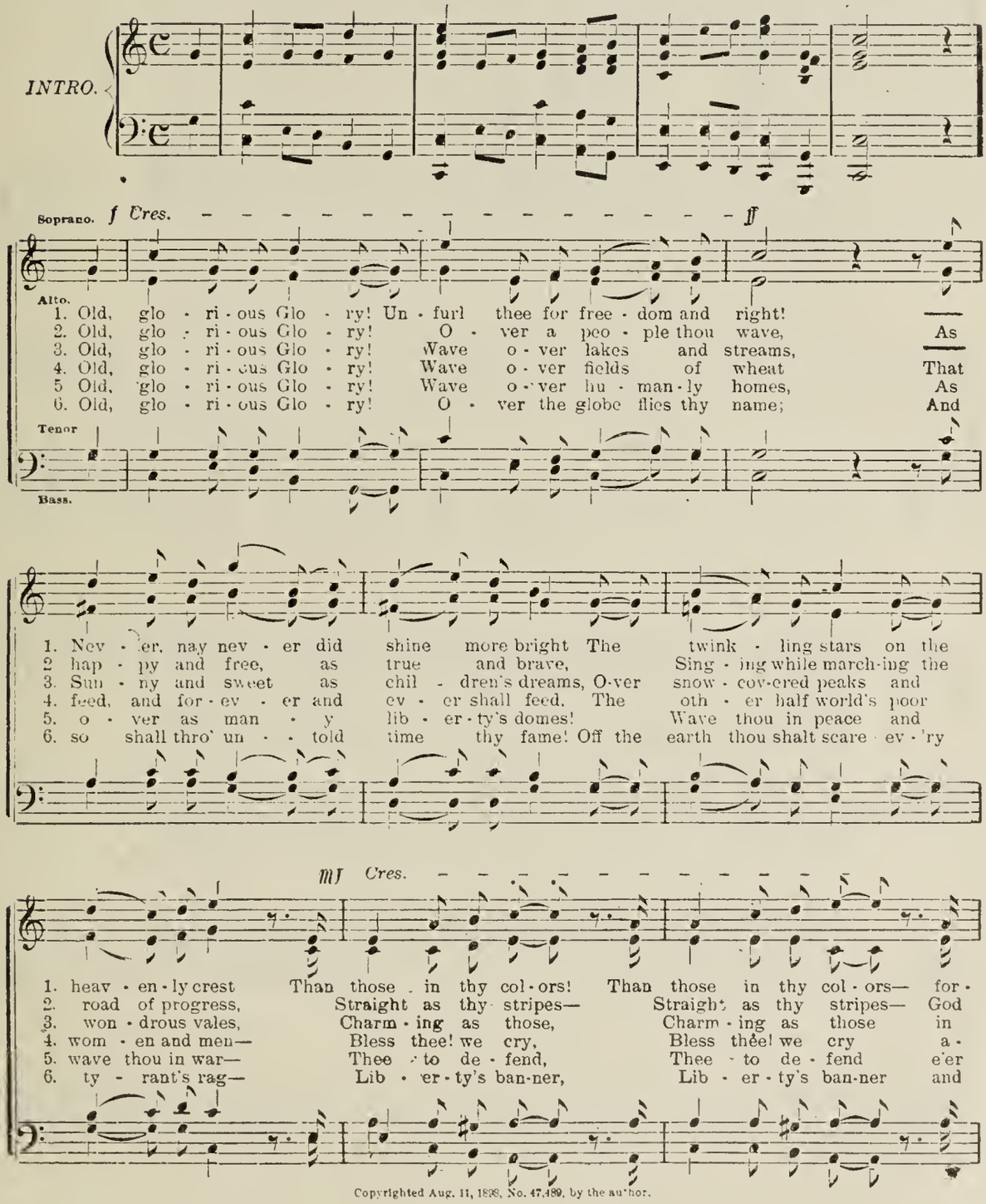
ELEVENTH SIGNAL—Each pupil seizes the seat preparatory to turning it down.

TWELFTH SIGNAL—The school is seated.

FLAG-BEARER—The color-bearer grasps the staff at the lower end with his right hand and a foot or more (according to the length of the staff) above the end of the staff with his left hand. The staff is held directly in front of the middle of the body, slightly inclined forward from the perpendicular. At the FOURTH SIGNAL, the flag will be dipped, returning the salute; this is done by lowering the left hand until the staff is nearly horizontal, keeping it in that position until the TENTH SIGNAL, when it will be restored to its first or nearly vertical position.

OLD GLORIOUS GLORY.

Words and Music by GEORGE BECH.



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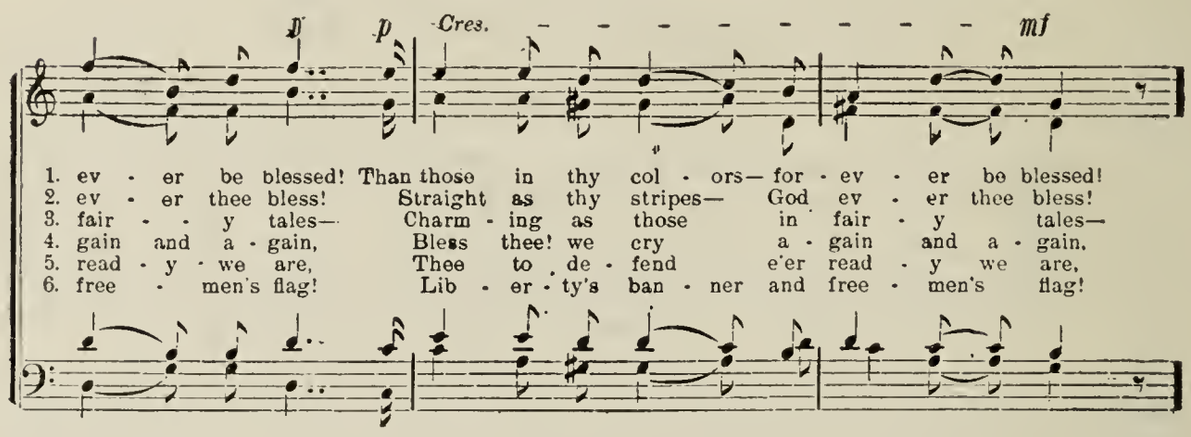
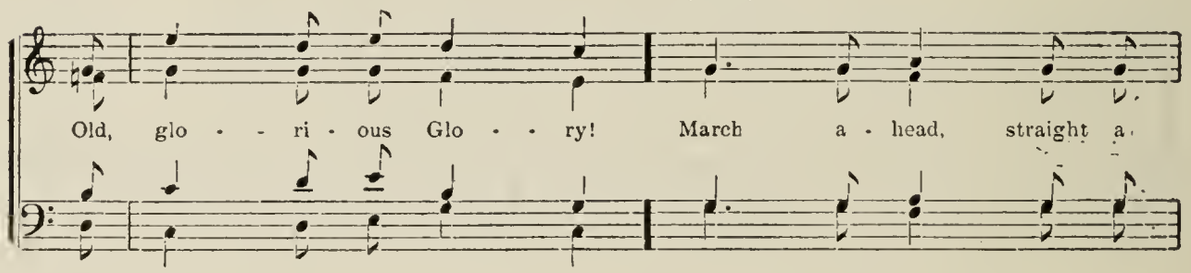
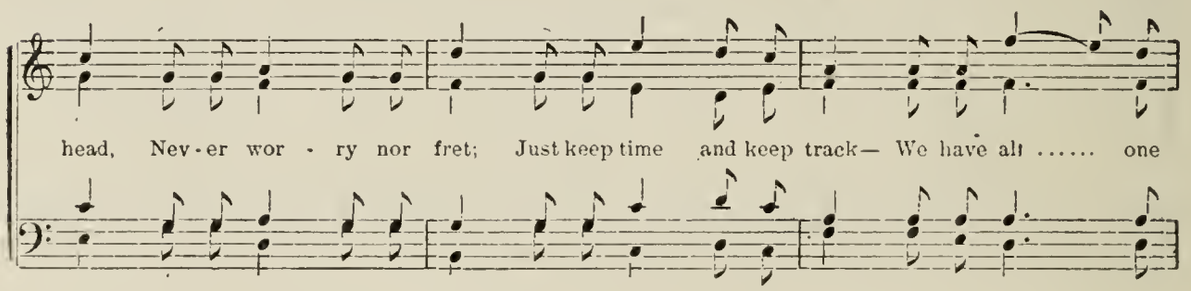
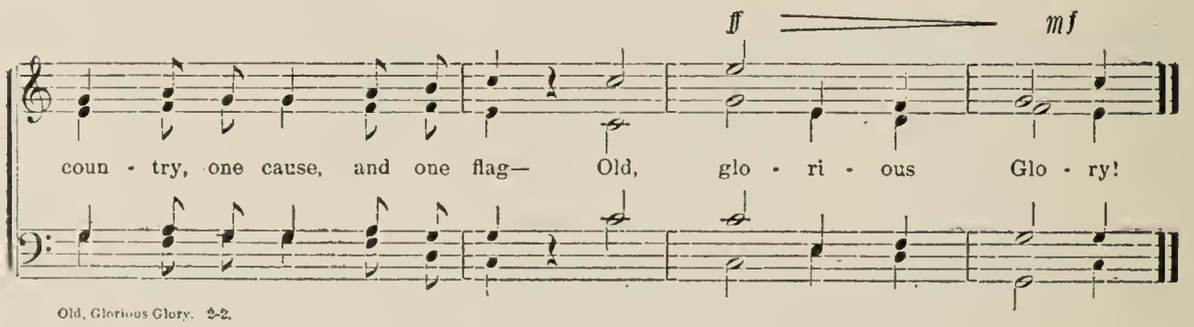

f p Cres. mf
1. ev - er be blessed! Than those in thy col - ors— for - ev - er be blessed!
2. ev - er thee bless! Straight as thy stripes— God ev - er thee bless!
3. fair - - y tales— Charm - ing as those in fair - y tales—
4. gain and a - gain, Bless thee! we cry a - gain and a - gain,
5. read - y - we are, Thee to de - fend e'er read - y we are,
6. free - men's flag! Lib - er - ty's ban - ner and free - men's flag!

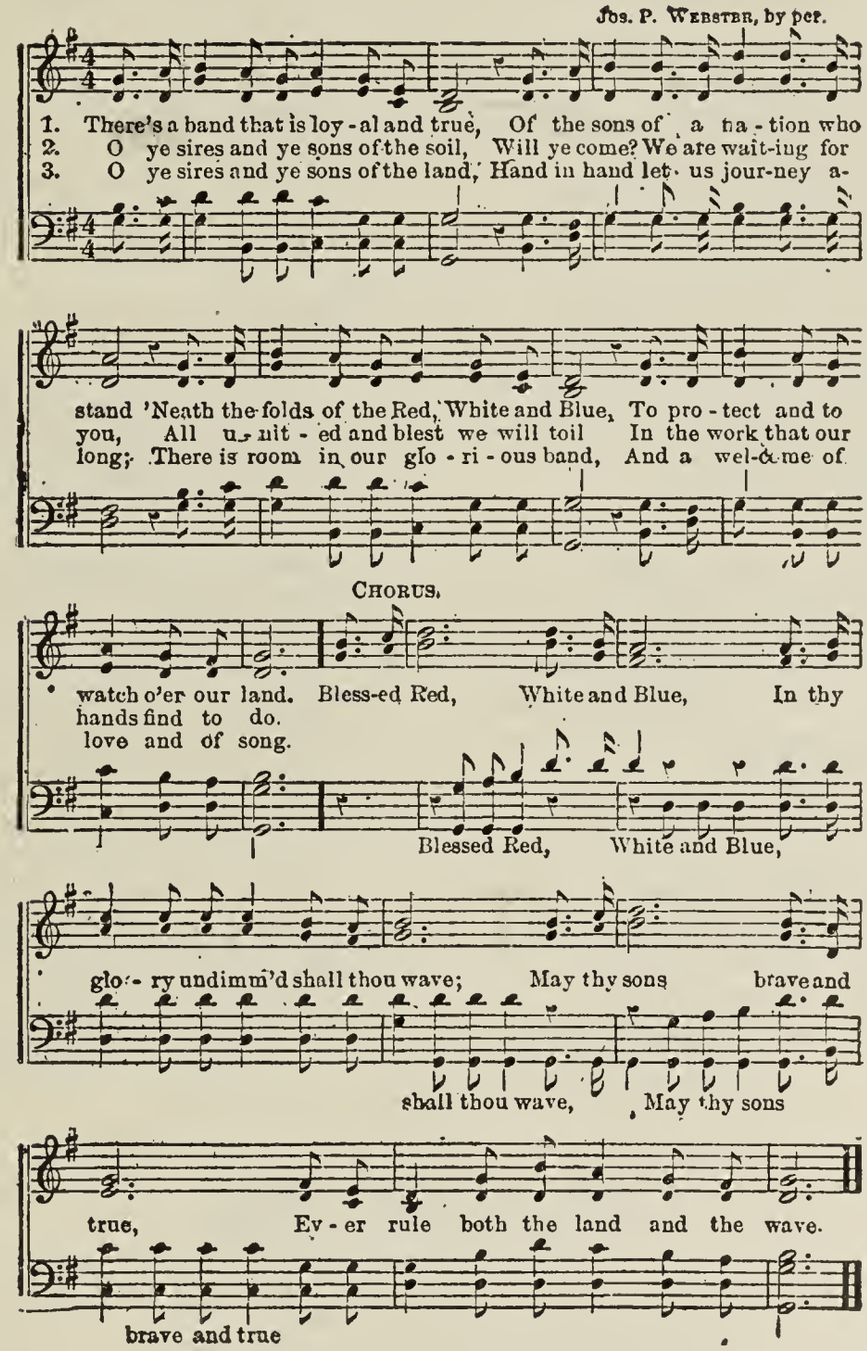
REFRAIN.


Old, glo - - ri - ous Glo - - ry! March a - head, straight a -


head, Nev - er wor - ry nor fret; Just keep time and keep track— We have all ..... one


ff mf
coun - try, one cause, and one flag— Old, glo - ri - ous Glo - ry!

RED, WHITE, AND BLUE.



THE EVERGREEN STATE.

[TUNE—"America."]

My chosen state, to thee—
Cleft by the Opal Sea,
Evergreen state!
Land of the emerald ferns,
Land where the sunset burns—
To thee my heart e'er turns,
With thee I wait.

When sunset fires thy peaks,
Mountain to Mountain speaks—
"Dark hours are near!"
But when the night is done
Rays of soft color run
Up from the rising sun—
Flashing "Good Cheer!"

Thy future shall be grand,
Arise and take thy stand—
Strong, proud and free!
In the world's march keep tread
Where Truth's white star has led,
Let no hard words be said,
Ever, of thee!

All thy mistakes are past,
Lift up thy head at last—
Smile thro' thy tears!
Thy darkest hour is gone,
Hail, hail the golden dawn—
Press on, and on, and on
Thro' all the years!

—ELLA HIGGINSON.

AMERICA.

[TUNE—"America."]

My country, 'tis of thee,
Sweet land of liberty,
Of thee I sing;
Land where my fathers died,
Land of the pilgrim's pride,
From every mountain side
Let freedom ring.

My native country, thee,
Land of the noble free,
Thy name I love.
I love thy rocks and rills,
Thy woods and templed hills;
My heart with rapture thrills;
Like that above.

Let music swell the breeze,
And ring from all the trees
Sweet freedom's song;
Let mortal tongues awake,
Let all that breathe partake,
Let rocks their silence break,
The sound prolong.

Our Father's God, to thee,
Author of liberty,
To thee we sing.
Long may our land be bright
With freedom's holy light;
Protect us by thy might,
Great God, our King.

—SAMUEL FRANCIS SMITH.

SCATTER THE FLOWERS.

[AIR: "Tenting on the Old Camp Ground."]

We come with gifts of flowers sweet
For each dear soldier's grave;
We'll cover the mounds where they gently sleep,
Those boys so true and brave.

CHORUS—

Many are the boys who are sleeping for aye
Under the sod and dew;
Many are the hearts sending love today
To those brave boys in blue.
Scatter the flowers, scatter the flowers,
Over the soldiers' graves.
Scatter the flowers, scatter the flowers,
Over the soldiers' graves.

We'll honor the graves of our soldiers dead,
Who heard their country's cry,
Who left their homes and fought and bled
And died for liberty.

We'll bring them today the violets blue,
And roses red and white;
Those colors bright they bore so true,
For God and home and right.

—ADA SIMPSON SHERWOOD.

BATTLE HYMN OF THE REPUBLIC.

[TUNE—"John Brown's Body."]

Mine eyes have seen the glory of the coming of the Lord;
He is tramping out the vintage where the grapes of wrath are stored.
He has loosed the fateful lightning of his terrible swift sword;
His truth is marching on.

CHORUS—Glory, glory, Hallelujah! etc.

I have seen Him in the watch-fires of a hundred circling camps;
They have builded Him an altar in the evening dews and damps.
I have read His righteous sentence in the dim and flaring lamps;
His day is marching on. CHO.—Glory, etc.

I have read a fiery gospel, writ in burnished rows of steel,
"As you deal with My contemners, so with you My grace shall deal;
Let the Hero, born of woman, crush the serpent with his heel,
Since God is marching on. CHO.—Glory, etc.

He hath sounded forth the trumpet that shall never call retreat:
He is sifting out the hearts of men before His judgment seat,
O, be swift my soul, to answer Him! be jubilant my feet!
Our God is marching on. CHO.—Glory, etc.

In the beauty of the lilies Christ was born across the sea,
With a glory in His bosom that transfigures you and me;
As He died to make men holy, let us die to make men free,
While God is marching on. CHO.—Glory, etc.

—MRS. JULIA WARD HOWE.

MOUNT VERNON BELLS.

From "Song Knapsack."

[AIR—"Massa's in de Cold, Cold Ground.]

Where the Potomac's stream is flowing,
Virginia's border through;
Where the white-sailed ships are going,
Sailing to the ocean blue;
Hushed the sound of mirth and singing,
Silent every one,
While the solemn bells are ringing
By the tomb of Washington.

CHORUS.—Tolling and knelling,
With a sad, sweet sound;
O'er the waves the tones are swelling,
By Mount Vernon's sacred ground.

Long ago the warrior slumbered—
  Our country's father slept;
Long among the angels numbered—
  They the hero-soul have kept.
But the children's children love him,
  And his name revere;
So, where willows wave above him,
  Sweetly, still, his knell you hear.

Sail, O ships, across the billows,
  And bear the story far,
How he sleeps beneath the willows,—
  "First in peace and first in war."
Tell, while sweet adieus are swelling,
  Till you come again,
He within the hearts is dwelling
  Of his loving countrymen.

STAR SPANGLED BANNER.

O, say, can you see by the dawn's early light,
  What so proudly we hailed at the twilight's last gleaming;
Whose broad stripes and bright stars, thro' the perilous fight,
  O'er the ramparts we watched, were so gallantly streaming;
And the rocket's red glare, the bombs bursting in air,
Gave proof thro' the night that our flag was still there—
O, say, does that Star Spangled Banner yet wave
O'er the land of the free and the home of the brave?

On the shore dimly seen thro' the mists of the deep,
  Where the foe's haughty host in dread silence reposes,
What is that which the breeze, o'er the towering steep,
  As it fitfully blows, half conceals, half discloses?
Now it catches the gleam of the morning's first beam
In full glory reflected, now shines on the stream;
'Tis the Star Spangled banner—O, long may it wave
O'er the land of the free and the home of the brave!

And where is that band that so vauntingly swore
  That the havoc of war and the battle's confusion,
A home and a country shall leave us no more?
  Their blood has washed out their foul footstep's pollution.
No refuge could save the hireling and slave
From the terror of flight or the gloom of the grave;
And the Star Spangled Banner in triumph doth wave
O'er the land of the free and the home of the brave.

O, thus be it ever, when Freedom shall stand
  Between their loved home and the war's desolation:
Blest with vict'ry and peace, may the heaven-rescued land
  Praise the power that hath made and preserved us a nation!
And conquer we must, when our cause it is just,
And this be our motto, "In God is our trust!"
And the Star Spangled Banner in triumph shall wave
O'er the land of the free and the home of the brave.

—*Francis Scott Key*

MEMORY GEMS.

Action.

Of every noble action the intent
Is to give worth reward, vice punishment.
Beaumont and Fletcher.

Think that day lost whose low descending sun
Views from thy hand no noble action done.
Selected.

What's done we partly may compute,
But know not what's resisted.
Burns.

Our grand business undoubtedly is, not to see what lies dimly at a distance, but to do what lies clearly at hand. *Carlyle.*

It is better to wear out than to rust out. *Bishop Cumberland.*

The manly part is to do with might and main what you can do. *Emerson.*

Let us then be up and doing,
With a heart for any fate,
Still achieving, still pursuing,
Learn to labor and to wait.
Longfellow.

Our acts, our angels are, or good or ill,
Our fatal shadows that walk by us still.
John Fletcher.

Only the actions of the just
Smell sweet and blossom in the dust.
Shirly.

We must not stint our necessary actions in the fear to cope malicious censurers. *Shakespeare.*

Heaven ne'er helps the man who will not act. *Sophocles.*

I have always thought the actions of men the best interpreters of their thoughts. *Locke.*

Every man feels instinctively that all the beautiful sentiments in the world weigh less than a single lovely action. *Lowell.*

What I have done was not for praise of men;
Then let me not be moved if now and then
My actions, thoughts expressed by tongue or pen,
Some one offend; oh let me never fear
If only right and just I in God's eyes appear.
W. J. Meredith.

The thing that chiefly concerns a man is not whether he succeed or fail, but that he do his whole duty according to the lights vouchsafed him until he die. *Ian McLaren* (adapted).

Books.

Laws die, books never. *Lytton.*

Books are embalmed minds. *Bovee.*

Books—Lighthouses built on the sea of time. *Whipple.*

There is no past so long as books live. *Lytton.*

Hark, the world so loud and they, the movers of the world, so still. *Lytton.*

A taste for books is the pleasure and glory of my life. I would not exchange it for the glory of the Indies. *Gibbon.*

> Books should to one of these four ends conduce,
> For wisdom, piety, delight, or use.
>
> *Denham.*

That is a good book that is opened with expectation and closed with profit. *Alcott.*

Books are the best things, well used; abused, among the worst. *Emerson*

If time is precious, no book that will not improve by repeated readings deserves to be read at all. *Carlyle.*

Some books are to be tasted, others to be swallowed, and some few to be chewed and digested. *Bacon.*

God be thanked for books. They are the voices of the distant and the dead and make us heirs of the spiritual life of past ages. *Channing.*

In proportion as society refines, new books must ever become more necessary. *Goldsmith.*

Bravery.

'Tis more brave to live than to die. *Meredith.*

None but the brave deserve the fair. *Dryden.*

A brave soul is a thing which all things serve. *Alex. Smith.*

A man of courage is also full of faith. *Cicero.*

There is one thing of which I am afraid, and that is fear.

Montaigue.

> Cowards die many times before their death;
> The valiant never taste of death but once.
>
> *Shakespeare.*

Fear makes men look aside and so their footing miss. *Dryden.*

The brave man seeks not popular applause. *Dryden.*

He is not worthy of the honeycomb that shuns the hive because the bees have stings. *Shakespeare.*

True bravery is shown by performing without witness what one might be capable of doing before all the world. *La Rochefocauld.*

Courage—an independent spark from Heaven's bright throne,
By which the soul stands raised triumphant, high, alone.

Farquhar.

Cowards are cruel, but the brave,
Love mercy, and delight to save.

Gay.

Character.

Both man and womankind belie their nature when they are not kind. *Bailey.*

No, when the fight begins within himself
A man's worth something.

Browning.

Clever men are good, but they are not the best. *Carlyle.*

Every one is the son of his own works. *Cervantes.*

Character is higher than intellect. A great soul will be strong to live, as well as to think. *Emerson.*

Human improvement is from within outward. *Froude.*

Whatever comes from the brain carries the hue of the place it came from, and whatever comes from the heart carries the heat and color of its birthplace. *O. W. Holmes.*

He is truly great that is little in himself, and that maketh no account of any height of honors. *Thomas A. Kempis.*

In this world a man must either be anvil or hammer. *Longfellow.*

Charms strike the sight, but merit wins the soul. *Pope.*

It is of the utmost importance that a nation should have a correct standard by which to weigh the character of its rulers. *Lord Russell.*

Charity and personal force are the only two investments worth anything. *Walt Whitman.*

The man that makes a character makes foes. *Young.*

Courage.

Courage, the highest gift that scorns to bend
To mean devices for a sordid end.

Farquar.

And fearless minds climb soonest unto crowns. *Shakespeare.*

But screw your courage to the sticking place,
And we'll not fail.

Shakespeare.

Courage is, on all hands, considered as an essential of high character. *Froude.*

Education.

Ignorance never settles questions. *Disraeli.*

A learned man is a tank; a wise man is a spring. *W. R. Alger.*

Education makes one an articulate member of the higher whole. *Dr. Wm. T. Harris.*

I have a firm belief that the rock of our safety as a nation lies in the proper education of our population. *Benjamin Harrison.*

Every man must educate himself. His books and teacher are but helps; the work is his. *Webester.*

If a man empties his purse into his head, no man can take it away from him. *Franklin.*

Education is the only interest worthy the deep controlling anxiety of the thoughtful man. *Wendell Phillips.*

Those who think must govern those who toil. *Goldsmith.*

Learning by study must be won,
'Twas ne'er entailed from sire to son.

Gay

Education commences at the mother's knee, and every word spoken within the hearing of little children tends toward the formation of character. *Ballou.*

Education is to know for the sake of living, not to live for the sake of knowing. *Kate Douglass Wiggin.*

Education begins the gentleman, but reading, good company, and reflection must finish him. *Locke.*

Right Education is such a preparation of the individual in physical, intellectual, and moral capacities, as will enable him to secure the highest enjoyment from their use, here and hereafter. *Roark.*

A boy is better unborn than untaught. *Gascoigne.*

'Tis education forms the common mind;
Just as the twig is bent the tree's inclined.

Pope.

Friendship.

A true friend is forever a friend. *Geo. McDonald.*

A generous friendship no cold medium knows. *Homer.*

Love all, trust few, do wrong to none. *Shakespeare.*

A friend is a person with whom I may be sincere. *Emerson.*

To God, thy country, and thy friend be true. *Vaughan.*

To suspect a friend is worse than to be deceived by him.

La Rochefoucauld.

A true test of friendship—to sit or walk with a friend for an hour in perfect silence without wearying of one another's company. *Mrs. Mulock-Craik.*

Well-chosen friendship, the most noble
Of virtues, all our joys makes double,
And into halves divides our troubles.
Sir J. Denham.

The condition which high friendship demands is ability to do without it. *Emerson.*

Friendship above all ties does bind the heart,
And faith in friendship is the noblest part.
Shakespeare.

We can never replace a friend. When a man is fortunate enough to have several, he finds they are all different. No one has a double in friendship. *Schiller.*

The friends thou hast and their adoption tried,—
Grapple them to thy side with hooks of steel.
Shakespeare.

A friend is gold: if true he'll never leave thee;
Yet both, without a touchstone, may deceive thee.
Thos. Randolph.

Friendship has a power
To soothe affliction in her darkest hour.
Henry Kirke White.

Habits.

Habit is ten times nature. *Wellington.*

Habit is the deepest law of human nature. *Carlyle.*

We first make our habits, then our habits make us. *Dryden*

The habits of time are the soul's dress for eternity. *Cheever.*

Men are but children of a larger growth. *Dryden.*

How use doth breed a habit in a man! *Shakespeare.*

Habit is a cable; we weave a thread of it every day and at last we cannot break it. *Horace Mann.*

Ill habits gather by unseen degrees;
As brooks make rivers, rivers run to seas.
Dryden.

The chains of habit are generally too small to be felt until they are too strong to be broken. *Johnson.*

Bad habits are as infectious by example as the plague itself by contact. *Fielding.*

Sow an act and you reap a habit; sow a habit and you reap a character, sow a character and you reap a destiny. *Boardman.*

We sleep, but the loom of life never stops; and the pattern which was weaving when the sun went down is weaving when it comes up tomorrow. *Beecher.*

Habits, though in their commencement like the filmy line of the spider, trembling at every breeze, may in the end prove as links of tempered steel, binding a deathless being to eternal felicity or eternal woe. *Mrs. Sigourney.*

Honesty.

Boys, keep your record clean. *John B. Gough.*

An honest man's the noblest work of God. *Pope.*

Dare to be true; nothing can need a lie. *Herbert.*

Falsehood is cowardice; truth is courage. *Ballou.*

Truth is truth whether the indivudal man believes it or not. *Moody.*

The first and worst of all frauds is to cheat oneself. *Bailey.*

Nothing is at last sacred but the integrity of our own minds.

Emerson.

You measure every man's honesty by your own. *Anon.*

The honest man, though e'er sae poor,
Is king of men for a' that.

Burns.

An honest man's word is as good as his bond. *Cervantes.*

There is only one failure in life possible, and that is not to be true to the best one knows. *Farrar.*

Oh, what a tangled web we weave when first we practice to deceive. *Scott.*

This above all—to thine own self be true;
And it shall follow as the night the day,
Thou canst not then be false to any man.

Shakespeare.

Truth crushed to earth shall rise again;
Th' eternal years of God are hers;
But error, wounded, writhes in pain
And dies among her worshipers.

Bryant.

Kindness.

Kindness has resistless charms. *Rochester.*

With malice toward none, with charity for all. *Lincoln.*

It is true that he who does nothing for others, does nothing for himself.

Kind hearts are more than coronets, and simple faith than Norman blood. *Tennyson.*

How far that little candle throws its beams,—
So shines a good deed in a naughty world.

Shakespeare.

Kindness—a language which the dumb can speak and the deaf can understand. *Bovee.*

That best portion of a good man's life,
His little nameless, unremembered acts of kindness and of love.

Wordsworth.

Count that day lost whose low descending sun,
Views from thy hand no worthy action done.

Anon.

There's nothing so kingly as kindness,
And nothing so royal as truth.

Anon.

Be good, my child, and let who will be clever;
Do noble deeds, not dream them, all day long;
And so make life, death, and that vast forever,
One grand, sweet song.

Kingsley.

In simple manners all the secret lies,
Be kind and virtuous, you'll be blest and wise.

Young.

Life is not so short but that there's always time enough for courtesy. *Emerson.*

Oh, there are looks and tones that dart
An instant sunshine through the heart;
As if the soul that minute caught
Some treasure it through life had sought.

Moore.

About Lincoln.

Our Country's Martyr.
He lives in our memories.
Though dead, he yet speaketh.
Freedom's noblest sacrifice.
We loved him much, but now we love him more.
Faithful to right, a martyr to justice.
He saved our country and freed a race.
With malice toward none, with charity for all.
We honor him dead, who honored us while living.
The poor man's champion ; the people mourn him.
Our Union cemented in patriot blood shall stand forever.
He won the wreath of fame.
And wrote on memory's scroll a deathless name.
Abraham Lincoln is dead, but his principles will live forever.

By Lincoln.

The Union must be preserved.

Fellow citizens *we* cannot escape history.

A nation may be said to consist of its territory, its people and its laws.

I believe this government cannot permanently endure half slave and half free.

No men living are more worthy to be trusted than those who toil up from poverty.

I claim not to have controlled events, but confess plainly that events have controlled me.

If our sense of duty forbid slavery, then let us stand by our duty, fearlessly and effectively.

I hope peace will come soon and come to stay, and so come as to be worth the keeping in all future time.

In giving freedom to the slaves we assure freedom to the free, honorable alike in what we give and what we preserve.

Having thus chosen our course, without guile and with pure purpose, let us renew our trust in God and go forward without fear and with manly hearts.

If this country cannot be saved without giving up the principle of liberty, I was about to say I would rather be assassinated on this spot than surrender it.

To sell or enslave any captured person on account of his color and for no offense against the laws of war, is a relapse into barbarism and a crime against the civilization of the age.

Do not worry, eat three square meals a day, say your prayers, be courteous to your creditors, keep your digestion good, steer clear of biliousness, exercise, go slow and go easy. Maybe there are other things that your special case requires to make you happy; but, my friend, these I reckon will give you a good lift.

Gold is good in its place; but living, patriotic men are better than gold

God must like common people or he would not have made so many.

I am indeed very grateful to the brave men who have been struggling with the enemy in the field.

This country, with its institutions, belongs to the people who inhabit it.

Let us have that faith that right makes might; and in that faith let us, to the end, dare to do our duty as we understand it.

The reasonable man has long since agreed that intemperance is one of the greatest, if not the greatest, of all evils among mankind.

The purposes of the almighty are perfect and must prevail, though we erring mortals may fail to accurately perceive them in advance.

Our government was not established that one man might do with himself as he pleases, and with another man, too. I say that, whereas God Almighty has given every man one mouth to be fed, and one pair of hands adapted to furnish food for that mouth, if anything can be proved to be the will of Heaven, it is proved by this fact, that that mouth is to be fed by those hands, without being interfered with by any other man who has also his mouth to feed and his hands to labor with. I hold, if the Almighty had ever made a set of men that should do all of the eating and none of the work, he would have made them with mouths only and no hands; and if he had ever made another class that he intended should do all the work and none of the eating, he would have made them without mouths and with all hands.

Nature.

If there's a power above us (and that there is, all nature cries aloud through all her works) He must delight in virtue. *Addison.*

Go forth under the open sky and list to Nature's teachings. *Bryant.*

To him who in the love of nature holds communion with her visible forms, she speaks a various language. *Bryant.*

No tears dim the sweet look that Nature wears. *Longfellow.*

O, what a glory doth this world put on for him, who with a fervent heart, goes forth under the bright and glorious sky, and looks on duties well performed, and days well spent. *Longfellow.*

But on and up where Nature's heart beats strong among the hills.
Lord Houghton.

Accuse not Nature, she hath done her part; do thou but thine.
Milton.

Let us a little permit Nature to take her own way; she better understands her own affairs than we. *Montaigne.*

Nothing in nature is unbeautiful. *Tennyson.*

I care not, Fortune, what you me deny;
You cannot rob me of free Nature's grace;
You cannot shut the windows of the sky;
You cannot bar my constant feet to trace
The woods and lawns, by living stream, at eve.
Thomson.

Nature never did betray the heart that loved her. *Wordsworth.*

One impulse from a vernal wood
May teach you more of man,
Of moral evil and of good
That all the sages can.
Wordsworth.

There is a pleasure in the pathless woods,
There is a rapture on the lonely shore,
There is society where none intrudes
By the deep sea and music in its roar.
Byron.

Keep a heart open to every voice from field and wood and sky. *Hamilton W. Mabie.*

Patriotism.

America means opportunity. *Emerson.*

Liberty and Union, now and forever, one and inseparable. *Webster.*

Millions for defence, but not one cent for tribute! *Pinckney.*

The patriot's boast,—where'er we roam,
His first, best country ever is at home.
Goldsmith.

Patriotism is not only a legitimate sentiment, but a duty. *King.*

We join ourselves to no party that does not carry the flag and keep step to the music of the Union. *Choate.*

There is a higher law than the Constitution. *Seward.*

Where law ends, tyranny begins. *Pitt.*

A poor freedom is better than rich slavery. *Beecher.*

One country, one Constitution, one destiny. *Webster.*

I regret I have but one life to live for my country. *Nathan Hale.*

Let us have peace. *U. S. Grant.*

Liberty cannot be established without morality, nor morality without faith. *Greely.*

The noblest motive is the public good. *Virgil.*

A great nation is made only by worthy citizens. *C. D. Warner.*

Liberty is not the right of one, but of all. *Herbert Spencer.*

Liberty is from God; liberties, from the devil. *Auerbach.*

Whether in chains or in laurels, liberty knows nothing but victories. *Wendell Phillips.*

I have never advocated war except as a means of peace. *U. S. Grant.*

The love of liberty, with life is given. *Dryden.*

Slow are the steps of freedom, but her steps never turn backward.
J. R. Lowell.

Death never comes too soon, if necessary, in defence of the liberties of our country. *Story.*

Our federal union: It must be preserved. *Andrew Jackson.*

One on God's side is a majority. *Wendell Phillips.*

I care not what course others may take, but as for me, give me liberty or give me death. *Patrick Henry.*

Authority must not forget humanity. *O'Reilly.*

The men who have changed the world, with the world have disagreed. *O'Reilly.*

A veteran of the war is dearer and nearer even than the flag. He is a living flag, starred and scarred. *O'Reilly.*

I have met the enemy and he is ours. *Commodore Perry.*

Don't give up the ship. *Captain Lawrence.*

He serves his party best who serves his country best. *Rutherford B. Hayes.*

The union of hearts, the union of hands and flag of the Union forever. *G. P. Morris..*

Party spirit is the madness of many for the gain of a few. *Alexander Pope.*

I require no guard but the affections of the people. *Washington.*

Rebellion to tyrants is obedience to God. *Thomas Jefferson.*

By the rude bridge that arched the flood,
Their flag to April's breeze unfurled,
Here once the embattled farmers stood
And fired the shot heard round the world.

Emerson.

Up with our banner bright,
Sprinkled with starry light,
Spread its fair emblems from mountain to shore,
While through the sounding sky,
Loud rings the nation's cry,—
Union and Liberty! One evermore!

Holmes.

Breathes there a man with soul so dead
Who never to himself hath said,
"This is my own, my native land?"

Scott.

The stability of this government and the unity of this nation, depend solely on the cordial support and the earnest loyalty of the people. *U. S. Grant.*

I was born an American, I live an American, I shall die an American; and I intend to perform the duties incumbent upon me in that character to the end of my career. *Webster.*

This nation under God shall have a new birth of freedom; and that government of the people, by the people, for the people, shall not perish from the earth. *Lincoln.*

We cannot honor our country with too deep a reverence; we cannot love her with an affection too pure and fervent; we cannot serve her with an energy of purpose or a faithfulness of zeal too steadfast and ardent. *Anon.*

Perseverance.

I will find a way or make one. *Hannibal.*

God helps them that help themselves. *Franklin.*

All that's great and good is done just by patient trying.

Phœbe Cary.

Be firm! One constant element in luck
Is genuine, solid, old Teutonic pluck.

Holmes.

The men who try to do something and fail are infinitely better than those who try to do nothing and succeed. *Lloyd Jones.*

We shall escape the uphill by never turning back. *Rossetti.*

In the lexicon of youth which fate reserves for a bright manhood, there is no such word as fail! *Lytton.*

Attempt the end and never stand to doubt;
Nothing's so hard but search will find it out.

Herrick.

Heaven is not gained at a single bound,
But we build the ladder by which we rise,
From the lowly earth to the vaulted skies,
And we mount to its summit round by round.

Holland.

Perseverance, dear my lord,
Keeps honor bright; to have done is to hang
Quite out of fashion, like a rusty mail,
In monumental mockery.

Shakespeare.

About Washington.

Eternity alone will reveal to the human race its debt of gratitude to the peerless and immortal name of Washington. *James A. Garfield.*

When the corner-stone of the Washington monument was laid Mr. Winthrop said: "Build it to the skies--you cannot outreach the loftiness of his principles; found it upon the massive and eternal rock—you cannot make it more enduring than his fame; construct it of the purest Parian marble—you cannot make it purer than his life."

Webster said: "America has furnished to the world the character of Washington; if our American institutions had done nothing else, that alone would have entitled them to the respect of mankind."

Lord Erskine once wrote to Washington: "You are the only being for whom I have an awful reverence."

Lafayette, when speaking of his friend Washington, once said: "Never did I behold so superb a man."

He changed mankind's ideas of political greatness. *Fisher Ames.*

Gladstone called Washington "the purest figure in history."

When war with France seemed imminent, in 1798, President Adams wrote to Washington: "We must have your name, if you will permit us to use it; there will be more efficacy in it than in many an army."

Jefferson once wrote to Washington, "The confidence of the whole nation centers in you."

At one time in the House of Commons, Charles James Fox, in speaking of Washington, called him "that illustrious man, before whom all borrowed greatness sinks into insignificance."

The fame of Washington stands apart from every other in history, shining with a truer luster and more benignant glory. *Irving.*

The republic will live so long as it reveres the memory and emulates the virtues of George Washington. *Chauncey Depew.*

By Washington.

Speak no evil of the absent, for that is unjust.

The love of my country will be the ruling influence of my life.

Be not forward, but friendly and courteous.

Associate yourself with men of good quality, if you esteem your own reputation, for it is better to be alone than in bad company.

Be not hasty to believe flying reports to the disparagement of any.

Use no reproachful language against anyone, neither curse nor revile.

When another speaks be attentive yourself and disturb not the audience.

When you speak of God and his attributes, let it be seriously and in reverence.

Undertake not what you cannot perform, but be careful to keep your promise.

Think before you speak.

Always do your best.

Always speak the truth.

Peace with all the earth is my sincere wish.

Every action in company ought to be with some sign of respect to those present.

Wherein you reprove another, be unblamable yourself; for example is better than precept.

Labor to keep in your heart that little spark of celestial fire called conscience.

Let your recreations be manful, not sinful.

Seek not to lessen the merits of others; neither give more than due praise.

PSYCHOLOGY IN EDUCATION.

1. The purpose of intellectual training is *to acquire power* through *knowledge* and *exercise.*

2. *To acquire facts* and *to exercise the mental faculties* is the work of all grades from the primary schools to the higher institutions of learning.

3. To teach successfully a teacher must know
   (1) The subject taught.
   (2) The nature of the mental faculties.
   (3) The relation of the studies pursued to the mental faculties.

4. A teacher should consider not only the intellectual tendencies, but the prevailing sensibilities also, which have to do with making study and teaching pleasant.

5. Education demands the exercise of the will, even at the expense of pain and fatigue.

6. School work should exercise all the faculties in the natural order of their development, and a course of study should be arranged to do this in the most effective way.

7. For the highest education of the senses they must be
   (1) In good health, and
   (2) Constantly exercised.

8. The reason, judgment and ethical faculties are reached through the senses.

9. Abstract qualities should be reached by object lessons, and should be taught subsequent to them.

ELEMENTS OF PSYCHOLOGY.

1. Mind is that which knows, feels, and wills.

2. Psychology is the science which treats of the mind and its activities. By mind is meant the soul, that is, the intellectual and spiritual part of man.

3. Psychology is of use to teachers (1) As a culture study, (2) As a means to understand the motives and possibilities of children in their mental development, (3) As a guide in bringing

a child's mind in touch with the subjects used to develop mental powers.

4. The methods of studying Psychology are (1) Self-examination, or reflection upon one's own mental acts and motives. This method is often unreliable, since the mind cannot be occupied with intense activity, and at the same time turn upon itself. The moment a person stops to analyze an impulse of anger, the anger subsides. The monkey never finds his image behind the mirror. Experiences must therefore be analyzed from memory, which is often dimmed by time. (2) Observation of others. This method is often used in a way which misleads the investigator, from the tendency to judge of a mental act from the immediate environment. To make safe generalizations, extended observations must be made, covering the various periods of life and the varying conditions of living. (3) Study of literature and text-books. This method of study is often unfruitful, because the reader is unable to interpret a writer's words. Many arguments and misunderstandings arise between persons because they do not place the same meaning upon same words. This is more likely to occur in the use of psychological terms, and the greatest amount of care should be exercised in discovering the exact definition of words used in the discussion of mental phenomena. The study of general literature is quite valuable in conveying to the reader a picture of human nature in its various phases, and under proper instruction it becomes a reliable guide to psychological processes. Wide reading and constant reference to good dictionaries are necessary to secure the best psychological knowledge from the study of books. And as great historical epochs are brought about from psychological causes, a broad knowledge of historical facts is necessary to understand well any one period, its causes, relations, and results. (4) Physiological experiment. The study of the nervous system both of man and of other animals reveals many interesting facts which assist the scientist to reach proper conclusions. The interdependence of mind and body renders it imperatively necessary to know something of the body to understand the operations of the mind.

QUERIES.—1. What do you mean by psychology? By mind?

2. Of what use to a teacher is psychology?

3. Name four methods of studying psychology.

4. Are you able to analyze your impulse of anger and to feel angry at the same time?

5. Have the lower animals a mind? Have they reason?

6. Is it safe to base psychology on self-experience alone? Do we measure psychology by ourselves, or do we measure ourselves by psychology?

7. Is it psychologically possible for a follower of Hamilton to judge Jefferson aright, and *vice versa?* Is it possible for a Filipino to judge civilization from an American standpoint? How are psychology and history related?

8. Give an illustration of the effect of bodily condition on mental action, and of mental condition on bodily action.

RELATIONS BETWEEN THE BODY AND MIND.

1. Bodily excitations, by means of afferent nerves, are carried to the brain, and when they are received by the mind, are called *sensations.*

The mind, in turn, is expressed and interpreted by means of physical action. A knowledge of the physiology and hygiene of the human body is necessary to an understanding of mental phenomena. See a text in physiology for details about the nervous system and special sense organs.

2. *Good health is the first essential to good mental action.* "A sound mind in a sound body — this is the short but complete definition of happiness in this world," said John Locke.

3. *The physical growth of children should be considered in relation to their school work.* Bodily habits which tend to develop health and growth should be encouraged, and the child should be protected from habits and conditions which tend to debilitate the mind, impair the body, or dull the moral sense.

4. *Temperance — moderation — in exercise, dress, and diet is necessary for the best mental action.* Healthy organic action results from proper exercise, while over exertion results in

fatigue. The dress often diverts the mind by painful annoyance, and when it is not regulated according to the climatic conditions, disease often results. It is also a well known fact that over-eating or hunger disturbs the mind and hinders consecutive and accurate thinking.

5. *Ventilation and heating of the school room has an immediate relation to a pupil's progress.* A room with poor light, foul air, and a temperature too cold or too warm, will be poorly disciplined and poorly taught.

6. *The mental conditions* modify the action of the organs of the body, and thereby affect the health. The influence of interest, joy, grief, surprise, and other emotions upon the heart-action, digestion, and nervous action, comes within the experience of every teacher and observer.

QUERIES.—1. Can a hungry child be readily interested in his lesson?

2. In what ways can the dress of children impair their ability to learn readily?

3. Can pupils play so vigorously as to become fatigued and unable to do their class work?

4. Should a child be required to study a lesson when in fright or grief?

5. State some practical principles which govern a teacher in caring for the proper relation between a child's body and mind.

ATTENTION.

1. Attention is the direction of the mind to some object or subject. It is concentrated consciousness. Just as the lens concentrates the sun's rays into a burning focus, so the power of attention brings the consciousness upon a central object and emphasizes the perception.

2. There are three forms of attention: (1) Passive attention, sometimes called non-voluntary attention, resulting from stimulus or attraction which demands our attention without effort on our part. (2) Active attention, also called voluntary

attention, resulting from the direction by the will. (3) Secondary-passive attention, being that state of mind in which acts are performed without great effort as a result of habit. The general law of habit, that "every time an act is repeated it is performed with greater facility than before under the same circumstances," arises from this stage of attention, wherein acts become automatic, as in the case of walking, piano playing, etc.

3. Intensified attention to one object excludes consideration of other objects. This enables a person to attend to a single duty in the midst of noise and confusion. It gives rise to "absent-mindedness."

4. Attention depends upon the (1) condition of the nervous system, and (2) the stimulus which excites it. A tired brain cannot give concentrated attention, nor can a pupil attend to a lesson when he is annoyed by a cold room or foul air. The stimulus attracts the attention according to its intensity. A vivid flash of lightning or an unexpected cannon shot will command the attention much better than a burning match or a pistol shot.

5. A stimulus may be external, appealing to the senses, or it may be internal, appealing to the motives and ideals of the mind. The first holds the attention of children, the second becomes effective with age and education.

6. The stimuli of attention in the order of their importance, from infancy to maturity, are (1) objects of novelty and variety, (2) objects of contrast, (3) objects adapted to experience, (4) objects arousing curiosity, (5) interest excited by the beautiful, (6) utility or self-interest, (7) enthusiasm imparted by associates, (8) approbation of friends and society, (9) will-power directing the mind into unknown fields, (10) sense of duty.

7. Voluntary attention matures into fixed habits, both of body and mind. A dull mind, with the habit of prolonged attention will achieve more than a brilliant mind without the habit of sustained application.

QUERIES.—1. What do you mean by an "absent-minded" person?

2. Can the mind attend to more than one thing at a time?

3. What kind of attention would be given to a runaway team on the street?

4. Does attention differ from reflection?

5. Does attention differ from observation?

6. How is perception affected by attention?

7. How is our memory affected by our attention?

8. How is our reason affected by our attention?

9. How is our emotional life affected by our attention?

10 What is meant by a teacher's request, "Pupils, please give me your attention?"

11. What was wrong with the teacher of whom his pupils said, "We all hated him, but he was the best teacher we ever had?"

12. Explain the interest attached to hidden "puzzle" pictures.

13. Explain the effect of diverting the attention of a crying child.

14. Give some historic examples of wonderful attention.

MEMORY.

1. *Memory* is the power of mind to *retain* the perceptions of the mind, to *reproduce* them, to *recognize* them, and to *locate* them with reference to time and place.

2. *The power to retain experiences* is not considered by all psychologists alike. Some believe that an idea is stored up in the mind, and may be brought to the surface at intervals by circumstance or by will, as a picture or a book may be found among others of a package. Others believe that a perception or experience is not so much a *fact* as it is a *facility*, or power to act. They say that we remember just as we play the piano—by practice; and that percepts have no existence apart from the action of mind, just as a piece of music does not exist until the player plies her nimble fingers to the instrument.

3. *The power to reproduce real experience does not exist.* It is but the image which is represented. This reproduction is of various degrees of distinctness, however, and in some cases it

would appear that an original experience is reproduced. Such is the case when a timid person believes that he sees some animal at night; or in case of hallucination and insanity, when imaginary things and events appear to the mind. The varying degrees of distinctness with which an image is reproduced gives rise to many cases of forgetfulness, of mistakes, and of conflicting testimony. One person may have his mind turned with intensity to an act, and some event takes him from it. Afterward he believes that he performed the act. Internal tendencies of the mind indicate that he did. But another person knows that he did not. He is honestly mistaken.

4. *The reproduction of a percept depends upon* (1) The interval of *time elapsing* since the experience. Under similar circumstances recent events are remembered more distinctly than events of long ago. (2) *The intensity of the stimulus* which directed the attention. (3) The *repetition* of the perception. The law of habit obtains with the cultivation of memory. (4) *Association of percepts.* This association depends upon (a) similarity, (b) contrast, (c) and contiguity of time or place.

5. The *intellectual and emotional nature* of the individual has much to do with the power of memory. A person with a predisposition for natural science will remember minute details relating to an animal or plant, while another given to mathematics will soon forget the "beauty of the lilies" and instead will compute the movement of the stars.

6. There are also different kinds of memory arising from the sensations experienced. One person remembers *what he sees,* another *what he hears.* It is said that Napoleon desired to hear a name spoken, and to see it written, and that he scarcely ever forgot the name so learned. And the more of the senses brought to bear on an object, the more vivid will be the memory.

7. Memory may be cultivated (1) By *concentration of attention.* The subject of drawing is of special value in teaching any subject, as the attention must be concentrated to make a sketch of an object studied. (2) By *observation of the laws of health.*

All powers of the mind operate best in a healthy body. (3) By observation of objects as co-related with other objects. This implies a close study of each subject, and leads to the Herbartian doctrine of *apperception*. (4) By association of experiences from a logical stand point. A system of mnemonics may help the memory in some degree, but the safest aid in remembering a subject is to understand it thoroughly. A *logical mastery of a proposition* is the best assurance of remembering it. (5) By studying a subject from the *standpoint of utility*. In this respect applied science is fast becoming the leading feature of our modern education. Students attend to it, perceive it more vividly, and remember it more distinctly, because it has a direct bearing upon their life work. (6) By memorizing some literary gem, prose or verse, each day. (7) By narrating in detail the incidents of a trip or experience of a day. (8) By writing outlines of articles read or lectures heard. (9) By recalling visual images, making them as vivid as possible. (10) By trusting memory in the routine duties of the day.

QUERIES.—1. Is reading aloud ever an assistance in studying a lesson?

2. Is a written outline of a lesson helpful to the memory?

3. How is the method of questioning a class helpful to a pupil's memory?

4. Account for the conflicting testimony of honest witnesses at a court trial?

5. Can the memory be over-taxed?

6. Some persons tell a story by giving tiresome details; others give the related parts without the details. What is the psychological cause for the different style of narration?

7. Show the relation of "eye-memory" and "ear-memory" to the questions of teaching spelling.

8. Explain the term "apperception" in relation to the course of study for a public school.

9. By what means do you remember a water-melon?

10. Give historic examples of remarkable memory.

11. Why do some children appear to understand a lesson quickly, and so soon forget it?

IMAGINATION.

1. Imagination is the power of the mind to form the mental picture, or to reproduce ideas, of things not present.

2. Reproductive imagination is that by which images are reproduced as they actually did exist.

3. Constructive imagination is that by which images are combined into new images which never did exist in reality.

4. Reproductive imagination is less than memory. Memory will recognize an object when it is brought to the attention, just as a person remembers having seen some book which is shown him. Imagination recalls the image of the book without the presence of the book. Memory is the power to *retain*, to *reproduce*, to *recognize*, and to *locate* with reference to time and place, the perceptions of the mind; imagination consists in the power to *retain* and to *reproduce*.

5. Imagination is usually *directed by the will*. If not, and it is allowed to run riot with no guidance, it becomes *fancy*, or phantasy, and sometimes *dreams* and *hallucinations*.

6. Imagination is an *ally to the intellect*, and gives to the mind the complete relations of any proposition which may be presented. Imagination creates hypotheses by which great problems are solved.

7. Imagination largely *determines the emotions* and feelings of an individual. By one's réveries, if they could be pictured, would real character be shown. Also, one's feelings control the imagination; and physical disorder leads men to imagine false things about their best friends.

8. Imagination largely *determines one's belief*. The bitter partisan imagines the beauties of his theories, and is prone to read only his side of the question. He is thereby not qualified to give an unbiased judgment of the facts.

9. Imagination largely *determines one's action*. An act, unless it be a rash one, is done or is not done because of its consequences. The consequences can seldom be known, but must

be imagined. The habit of realizing the results of actions will make of any person a thoughtful citizen.

10. Imagination is of great use to writers and speakers in giving *vividness to expression.* By it the great creations of literature and art have been effected. It is of great use to the inventor, who builds by his imagination the machine which revolutionizes the social conditions of the world. It is of great use to the statesman who images the conditions which his theories would bring, and enthusiastically creates public opinion in favor of his measures. It is of great use to the student of nature and to the scientific investigator, who follow their imagination in pursuing their researches, until some scientific principle is established.

11. Imagination *may be used harmfully* by following the inclination to speculate or take chances upon imaginary results. The gaming table and lottery inflame the imagination, and lead to ruin, because the imagination pictures results which are by the nature of the case impossible. Much reading of fiction often leads to day dreaming, and false emotion, which weaken the will, and hinder prompt decisive action.

12. Imagination may be cultivated—

1. By forming clear and definite images.
2. By oral discription of experiences.
3. By oral review of literary selections read.
4. By written composition on stories read or scenes visited.
5. By imaginative descriptions of persons and places.

QUERIES.—1. What is the meaning of "the ideal" as compared with "the practical?"

2. What relation has the imagination to good taste?

3. What relation has a child's imagination to the sense of truth and falsehood?

4. In what way may the imagination degrade the mind?

5. In what way do you justify the "Santa Claus" delusion as to the effect on the imagination?

THINKING.

1. Thinking is the operation of the mind by which it acts upon mental phenomena, presented through sensation and perception, and comes into possession of new knowledge. The processes of working over the "raw material" is called thinking, and the product is called thought. Thinking thus becomes the observation of the relations between ideas or objects.

2. Thinking consists of *conception*, *judgment*, and *reason*. *Conception* is the process of combining the qualities common to several objects into a general notion, or "unit of knowledge." Conception should be clear and distinct. This clearness may be cultivated by the study of exact definitions and descriptions. The power to form clear concepts enables a student to classify facts, and to understand mental phenomena in their proper relations. Clear concepts are essential to a scientific knowledge of any subject.

3. *Judgment* is the act of comparing concepts, and affirming that they agree or disagree. This judgment, expressed in language, is a proposition.

4. *Reasoning* is the process by which the mind derives one judgment from another. Thus if one sees a plowed field, the first judgment is, "The field is plowed;" another immediately follows, "Some one plowed the field." Or if a man is seen in the city on Monday and in the country on Sunday, it is known that he came from the country to the city.

5. There are two kinds of reasoning, deductive and inductive.

6. Deductive reasoning applies a general truth to a particular instance. It assumes the form of what is named a syllogism, which is composed of three parts; a major premise, a minor premise, and a conclusion. Thus:

All animals have the power to move.
This object is an animal.
This object has power to move.

Much of our reasoning is of this nature, the major premise having been given us from axiomatic truths, opinion of others, personal prejudice, or experience.

7. Inductive reasoning is the process by which general principles are derived from the observation of several particular facts. Thus:

The air in this inverted tube expands when heated, as shown by the bubbles driven out through the water. The water in a full kettle runs over when heated. This wire grows longer when heated. Heat expands bodies.

After the general principles are established, they become premises for deductive reasoning.

8. It is seen that the inductive process is the one by which new principles are discovered, new experiments are made, new research is carried on. When due consideration is given to the subject, it is seen that men are given most to the deductive form, basing belief upon the judgments of the past generations. Thus the habit of conservatism becomes fixed, and it is very difficult to lead the world to take on new thought. Great thinkers of all ages are not appreciated by their own generation. Witness Socrates, Jesus Christ, Spinoza, Savonarola, Luther, Bacon, Galileo, Columbus, Garrison, and others.

9. Inductive reason takes the form of probability, as it begins with certain facts, and step by step approaches assurance and certainty. The conclusion may not be mathematically sure, but the degree of certainty is such, in many cases, that to doubt the truth of the conclusions would indicate imbecility.

Conclusions are based on analogy, experience, and testimony. From some resemblance, conclusions are reached by analogy. That is, if two things resemble each other in some respects, a proposition which is true of one is probably true of the other.

Certain phenomena occur in connection with some personal experience. Similar experience at another time will probably be attended by similar phenomena.

Men usually tell the truth to others. Therefore conclusions are probably true when reached from the testimony of others.

Circumstantial evidence also leads to conclusions probably true, when there are no other circumstances which can account for the thing to be proven, and when the circumstances presented do of themselves account for it.

10. Errors in reason are caused chiefly by basing deductions upon false premises, or by leaping to hasty conclusions by induction. Great leaders differ upon great questions, largely as the result of degrees of information, and discuss the question from false premises, because of a lack of knowledge. The inexperienced, especially children, reach conclusions inductively from facts too few to justify a safe result. It therefore requires a thorough education, and wide personal experience with the world, to become a good reasoner.

11. The reason may be cultivated by (1) Any concentration of mind. (2) The study of relations, in any subject investigated; classification. (3) The study of analogies. (4) The study of language, for clear concepts and exact definitions. (5) Self-examination as to our beliefs and statements, to insure a safe basis on which to base a conclusion. (6) Self-examination as to the effect of bias or prejudice upon our opinions or conclusions. (7) Search for a knowledge of all the facts related to the thing under consideration.

QUERIES.—1. Why does a child depend upon the judgment of the teacher or parent, without investigation?

2. Illustrate how a lack of details may lead to erroneous thinking.

3. Is a child's moral convictions formed by thought, or by emotions?

4. Can we form a habit of doubting to such an extent as to doubt our senses?

5. Can we suspend belief, or refuse to come to any conclusions regarding any well defined experience?

6. What relation exists between reason and imagination?

FEELINGS, OR SENSIBILITIES.

1. Physical sensations are reactions by the mind upon some stimulation or excitation of some part of the nervous system. Emotional feelings are such as arise from consciousness of some knowledge or some condition. The sensibilities, considered psychologically, are chiefly the emotional feelings.

2. The emotions which spring up spontaneously are called instinctive feelings; those which arise from knowledge or reflection are called rational feelings. If a person's knowledge excites some pleasurable emotion the person is "interested." Interest is the harmonious blending of thought and emotion. If there is no blending, there is no interest. If there is positive friction, there arises dislike, and even hatred.

The intellect may be so interested in a subject that all emotion is excluded, just as an absent-minded man loses the ordinary sensibilities when engaged in an absorbing subject. Also, the emotions may be so exclusively in control of the mind that reason is excluded. Neither thought nor feeling should be so intense as to exclude the other.

Feeling exerted is transformed into *action.* They thus become the *motives of human conduct*, and the basis of *moral character.*

3. The emotions are not susceptible of an exact classification, but are divided by good authority into the following classes:

4. *Egoistic*, having to do with the self and self-interest. These emotions are joy, contentment, pride, hope, and their opposites.

5. *Altruistic*, love, sympathy, fraternity, and their opposite, having to do not for self, but "for the other fellow."

6. *Intellectual*, such as curiosity, sense of intellectual power, love for truth.

7. *Æsthetic*, the sense of the sublime, the beautiful, and the humorous.

8. *Ethical*, the feeling of right and wrong, sense of justice, duty and obligation. From these emotions arise what is known as *conscience*, the arbiter of human ideals.

9. Also the *desires of life*, *property*, *power*, *excellence*, *approbation*, etc. These desires are partly instinctive, partly intellectual, and partly the result of instinct and thought combined. They are intensified by perception and imagination.

10. *Applications to Teaching.*

1. Mental activity is pleasant, mental inaction is pain.
2. Pleasing emotions react and lead to action.

3. Teachers should be pleasant, make school pleasant, make work pleasant.
4. Encourage self-esteem, depress vanity. Self--confidence and hope are fundamental requisites to growth and usefulness.
5. Exercise the altruistic emotions of love and sympathy. Exemplify the "brotherhood of man" by daily life with children. Repress hate, hold a "righteous indignation" for wrong action, but love the actor. "Love your neighbor as yourself."
6. Feed the impulse of curiosity until fundamental principles are discovered and mastered. Use any successful motive to induce mental action, but lead to the higher motive of *truth for its own sake.*
7. Cultivate the love for the beautiful and sublime. Be neat in person, keep a neat desk, a neat room, and inspire attention for the beauties of nature. Drive out the "blues" by the exercise of humor and sense of the ludicrous. "Laugh and the world laughs with you."
8. Remember that emotions are dulled by monotonous repetition. Vary work and play. Do not blame too often, or reproof will lose its effect. Do not praise too often, or praise will become flattery.
9. Remember that the ethical emotions come with maturity. A child has not the developed sense of right and wrong. Lead the thought and emotion into the habit of making distictions between acts as to right, wrong, duty, justice, expediency, etc. Educate into a keen conscience. Let every act and every thought point to DUTY as the end of complete living.
10. A person may be so coldly intellectual that emotional life cannot exist. A beautiful piece of statuary is perfect as statuary, but it has not the warmth of life. Also a person may be endowed with an emotional life so intense that judgment is not able to control action. In either case it is a teacher's duty to stimulate or repress until character is balanced.

11. Normal desires serve to excite to action, and should be gratified temperately. Abnormal desires, or artificial desires, such as vanity, tyranny, etc., should not be gratified. Teachers should carefully note the effect of gratifying childish desires, and check tendencies toward vanity, tyranny, and other evil tendencies.

12. So much depends on the personality of the teacher in making school life pleasant and abounding in the emotional richness of life, that all educational problems center upon the one point—the *character and ideal of the teacher.* A teacher should be worthy of imitation in all respects. Mental ability is fundamental, but emotional life is the guide to power.

QUERIES.—1. It is said that an education is a preparation for complete living. Does this apply to the intellect more than to emotion?

2. Discuss: Resolved, that pride influences men more than curiosity.

3. Do adults ever grow away from the same influences by which we control or influence children?

4. Two men were looking at Niagara Falls. One said, "What a wonderful work of nature. See the great volume of water pour over tne falls into the stream below." The other suid, "What's wonderful about that—I don't see that it can do anything else." What emotion characterized each?

5. Is conscience an intellectual or an emotional attribute of the mind?

6. Is *interest* an emotional or an intellectual state?

SCHOOL MANAGEMENT.

Suggestions on Organization.

1. Visit the school district before school opens.
2. Be at the school room early on opening day.
3. Have the plan of work prepared before school opens.

4. Ask assistance from the pupils. Do not ask advice.

5. Assign work to the classes promptly.

6. Seat the pupils with regard to convenient class exercises, taking due notice of all physical conditions of each pupil.

7. Establish a few quiet signals, which will not divert the attention of pupils not concerned with them.

8. Make few if any fixed rules, governing largely by good cheer and industry.

9. Change the temporary organization into permanent organization at the earliest possible day, and establish a convenient program as soon as the classification of pupils is determined.

10. *Assign enough work to keep all pupils employed.*

Suggestions on Classification.

1. Follow the state course of study if local conditions permit, and if they do not, work toward it as rapidly as possible.

2. Classify chiefly according to scholarship, but avoid keeping a pupil more than two years in one grade.
a pupil long in a class of pupils younger than himself.

3. Promote chiefly according to attainments in the class work, but keep in mind also the pupil's ability to do the work of the grade to which he aspires.

4. In the first three grades reading and spelling should be the basis for classification; in the next five, language and arithmetic. Condition pupils in other studies until they have made up their deficiency.

5. In a mixed school many classes can be combined in recitation. General exercises can be given to all grades at the same period; two or more grades may have the same spelling, reading, etc. Sometimes classes may alternate the work of the year, and save time for recitation periods.

6. Enforce the course of study, but avoid friction by leading pupils to take the subjects required in their grades, instead of commanding or driving them to do so.

7. Study the report of your predecessor, and work from the point he left the school.

8. Do not encourage a pupil to take too many studies for the sake of gaining a grade.

Suggestions on the Program.

1. Provide a definite period for each class exercise.

2. Give the shortest periods to the younger pupils, and provide for frequent recitations by all primary pupils.

3. Give each study a due proportion of time.

4. Do not close the day with recitations requiring severe mental exertion.

5. Provide for a due amount of recreation at regular intervals.

Suggestions as to the Study and Lesson Preparation.

1. Purposes of study.
   a. Study to establish a brain habit and mental discipline.
   b. Study to acquire facts.
   c. Study to acquire moral power.
   d. Study to arouse noble aspirations and high ideals.
2. Conditions for study.
   a. Surroundings must be favorable to physical comfort.
   b. Hunger and thirst must be satisfied.
   c. Time must be regulated with reference to the pupil's mental characteristics.
   d. Subjects must be varied.
3. Helps to study.
   a. Text books.
   b. Reference books and papers.
   c. School cabinets.
   d. Good apparatus.
   e. A LIVE TEACHER.
4. Incentives to study.
   a. Proper incentives.—To gratify curiosity, to gain the approval of others, self approbation, to overcome difficulties, to succeed in life, to be useful in life, to fulfill the duty of self culture, to enjoy higher ideals.
   b. Improper or questionable incentives.—To win a prize, to excel another pupil, to win a record, to escape shame, to escape punishment.

5. How to study.
   a. Read the lesson carefully.
   b. Select the essential parts of the lesson.
   c. Search for the relation between these parts.
   d. Try to be interested.
   e. Study to *know* rather than to recite.
   f. Study each lesson with a view to concentration of attention.
   g. Study systematically.
   h. Prove what the book says by experience, if possible.
   i. Follow each statement by a text book with independent thinking.
   j. Change from one subject to another, from study to recreation, to prevent fatigue.
   k. Acquire the habit of giving oral and written expression to what is learned.

Suggestions as to Recitation.

1. Objects.
   a. To develop the power of independent expression.
   b. To develop self-confidence.
   c. To intensify a knowledge of facts.
   d. To awaken interest in the subject.
   e. To cultivate the habit of attention.
   f. To correct erroneous impressions.
   g. To test the pupil's preparation.
   h. To add to the pupil's knowledge of facts.
   i. To direct in further study.
   j. To give the best possible mental discipline.
2. Requisites for a good recitation.
   a. A proper place.
   b. Suitable apparatus, texts, or both.
   c. Proper discipline.
   d. Sufficient time.
   e. Interested class.
   f. Able and earnest teacher.

3. Methods.

a. The Socratic method, leading pupils by well arranged questions until he comes to his conclusions independently.

b. The topical method, by which pupils gather knowledge by topics, and recite orally or write the results of their research in the form of compositions.

c. The question method, by which the teacher asks questions on the subject matter of the lesson to test the preparation.

d. The discussion method, by which pupils are arrayed against each other as to matter of opinion, and the search for facts to establish their views.

e. Conversational method, by which the teacher takes more direct part, and brings his personality to bear directly on the pupil's mind. A scholarly teacher can use this method with wonderful results.

f. The lecture method, by which the teacher reads or speaks, and the pupil takes notes of the points developed, and of references for further study.

Suggestions as to Questioning.

1. Do not ask questions to pupils in any regular order.
2. Do not cultivate the habit of concert answers.
3. Do not ask a question so as to suggest the answer.
4. Do not follow the text book in the order of questions.
5. Ask questions promiscuously.
6. Ask frequent questions of the inattentive.
7. Do not repeat questions.
8. Do not scold for inability to answer.
9. Ask questions in a pleasant tone of voice.
10. Give pupils time to reflect before answering.
11. Make questions clear and definite.
12. Make questions directly related to the lesson.
13. Make questions exhaustive.
14. Do not put more than one thing in a single question.
15. Avoid questions to be answered by yes or no.

16. Avoid questions in alternate form, as—"Is *that* a conjunction or not?"

17. Sometimes put questions to all the class.

18. Sometimes put questions to each individual pupil.

19. Sometimes let a pupil put questions to the rest of the class.

20. Restrain all silly or irrelavent questions.

Suggestions as to School Examinations.

1. They should test a pupil's ability in the work of the class.

2. They should act as an incentive to continued application.

3. They should increase interest in the subjects taught.

4. They should be general, applying to principles rather than to details and technicalities.

5. They should be thorough.

6. They should test pupil's power to think.

7. They should not foster "cramming" or special preparation.

8. They should not be at fixed times.

9. They should be both oral and written tests.

10. They should not be long and tedious.

11. They should not be the exclusive test for promotion.

12. They should be graded liberally.

13. Allowance in favor of the pupil should be given for originality and unconscious error.

Suggestions on School Ethics.

1. The duty of a teacher.
   a. To give painstaking care of the mental welfare of the pupils.
   b. To teach by example and precept the fundamental truths of morality.
   c. To have a care for the physical wants of the pupils, as to habits of life, and as to the conditions of the school house and grounds.
   d. To care for the social culture of the pupils, developing good taste, love for the pure and beautiful, ease in society, etc.

e. To create a school spirit in the community.
f. To exert personal influence outside the school room.
g. To give frank counsel to parents about the children.
h. To grow in scholarship and professional spirit.
i. To overcome dogmatic tendencies.
j. To cultivate an *esprit de corps*.
k. To promote all means of elevating the profession.
By writing for the press.
By visiting schools.
By attending institutes.
By encouraging Normal schools.
By increasing the district libraries.
l. To care for his physical health.

2. The duties of the pupils.
a. To care for themselves and their property.
b. To respect the rights of others.
c. To regard the comfort and the dignity of the teacher.
d. To regard the dignity and powers of the school officers.
e. To aspire to higher grades in school, and to some institution of higher education.

3. The duties of school officers.
a. They should select proper sites for school houses.
b. They should furnish the school room.
c. They should beautify the school premises.
d. They should provide suitable library books and books for the teacher's desk.
e. They should enforce the state course of study.
f. They should encourage competent teachers.
g. They should visit the school.
h. They should encourage educational spirit in the district.

Suggestions on School Government.

1. School government is to preserve order and to train in self-control.

2. The school should be systematic.

3. The chief element of order is industry.

4. The teacher should be vigilant, but not secretive nor spying.

5. The teacher should not show anger.

6. The teacher should be cheerful, patient, and companionable.

7. The teacher should have confidence in himself, his pupils, and his profession.

8. The teacher should lead by love and personal magnetism.

9. The teacher should manifest social and mental culture.

10. The teacher should have a strong will, tempered with kindness and diplomacy.

11. The teacher should be just in all decisions.

12. Attention should be given to ventilation, heating, lighting, seating, and other physical conditions in their relation to school discipline.

13. Do not make inflexible rules for conduct and penalties.

14. DO NOT SCOLD OR THREATEN.

Suggestions on School Punishment.

1. They are designed to reform, to warn, and to protect.

2. Infliction should be certain.

3. Punishment should correspond in degree to the offense.

4. Punishment should consider the physical condition of the pupil.

5. Punishment should be related to the offense as effect to cause.

6. The motive for an act should be considered before inflicting a punishment.

7. Punishment should be modified by age and sex.

8. Punishment should be administered privately unless for severe offenses.

9. Use corporal punishment as a last resort.

10. Avoid all infliction on the head.

11. Do not confine a pupil.

12. Do not degrade a pupil.

13. Do not be vindictive.

14. DO NOT PUNISH WHEN ANGRY.

A METHOD OF CORRELATION.

As a type of correlation in spelling, language, drawing, and writing, the following is taken, by consent, from the "Child Study Monthly," of May 1, 1900:

Miss Jennie Redfield, principal of Lincoln School in Omaha, has worked out a plan in teaching spelling that has awakened interest in the other schools of our city and elsewhere. The plan embraces the following considerations: The difficulty many pupils have with spelling is due to a misunderstanding of the significance of the words to be spelled. To overcome this trouble, many devices have been used, one of which has proved of much assistance to the child's understanding, and has been the means of securing unusually good spelling.

The lesson is prepared one day, and the following day it is recited, the pupils writing it on slips of paper from the teacher's dictation. These papers are collected and marked by the teacher. Those which are correct are placed on file, while those containing errors are laid aside for correction. Immediately after the papers are collected, preparation for the next day's lesson is begun. The teacher assigns the lesson by writing on the blackboard the first and last words of the lesson from the spelling book. One class is then sent to the blackboard with the books. These pupils copy the lesson, numbering the words carefully. They explain all new words by drawing pictures to illustrate the meaning. It is interesting to note the ingenuity used by the children in illustrating words with abstract meaning, such as truth, inspiration, etc., and it is amusing to see the variety of ideas they possess. They delight in this picture work, and forget they are learning orthography thereby.

During this time the members of the class in the seats give oral sentences illustrating the use of the words of the lesson in course of preparation. These sentences must tell exact truths and the children are encouraged to tell those things that are both interesting and instructive. They are obliged to use the exact form of the word given in the lesson.

The plan reaches far beyond a mere spelling lesson. It is more a study of word analysis, an exercise in the use of reference books, and a practice of telling exact truth. Dictionaries are used by all pupils above the third grade.

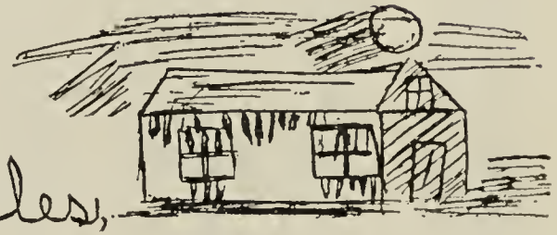
The following are some pictures selected from a great number of about the same character and quality, which will show how pupils illustrate the lessons by pictures:

Lincoln School.

Annie Donnitz Seventh Grade.

Orthography

Borealis,

 acles,

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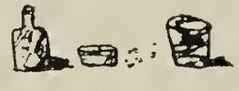
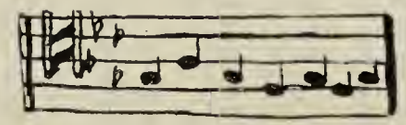
homeopathist, 

tenor, 

obstacle,

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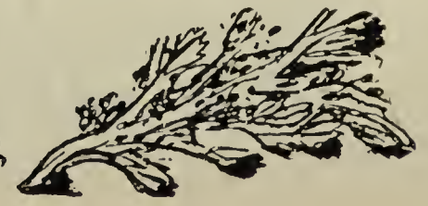
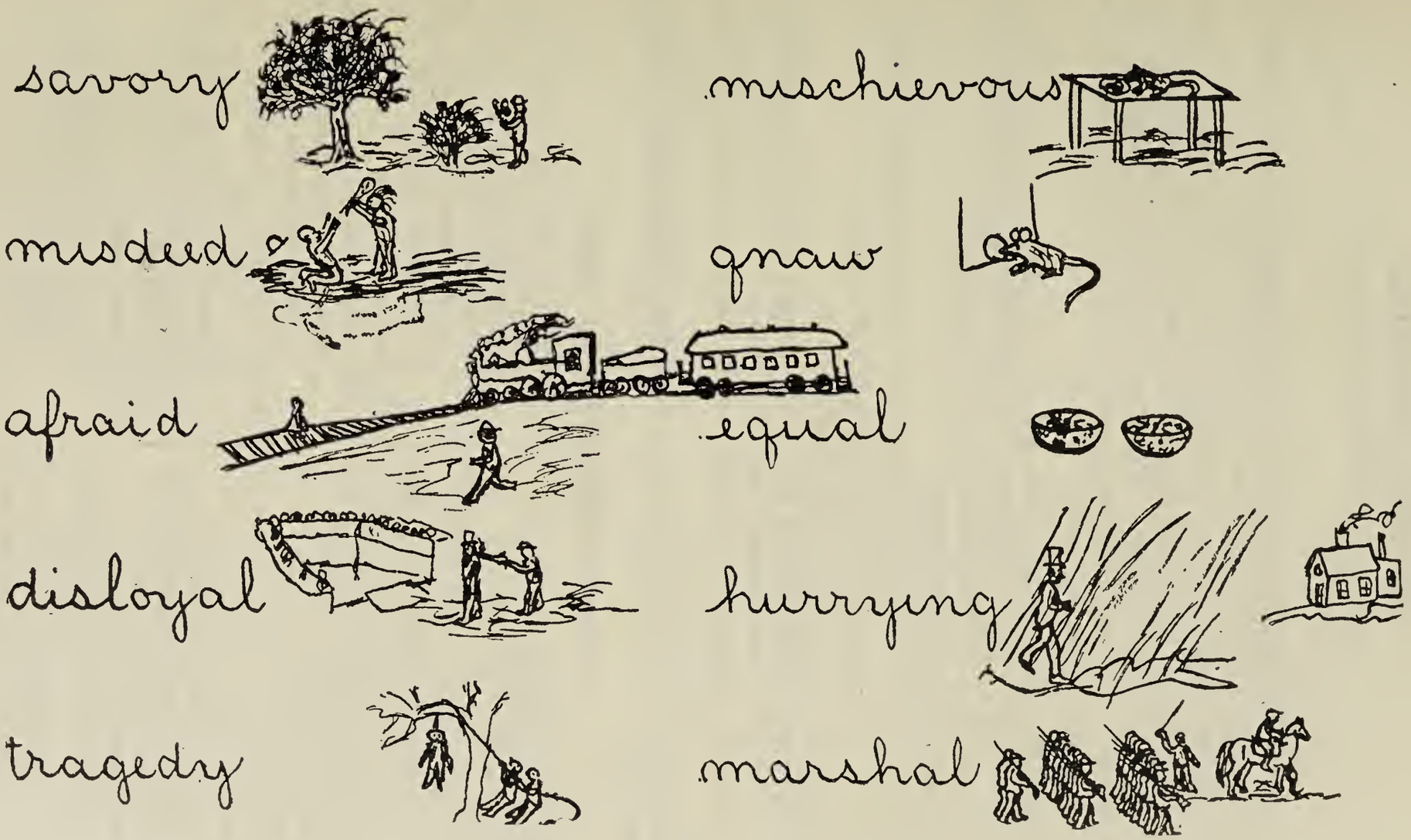
exquisite, 



Spelling paper of Frank Inman, Lincoln School, Sixth Grade.

PHYSICAL CULTURE.

[From Seattle School Report, 1893.]

The following outline is designed to aid teachers to more easily follow the course of instruction given in physical culture.

It may be found necessary to change the exercises in some respects, otherwise they will be presented in order, and it is desired that pupils memorize the work as given. Each exercise must be practiced with firmness and precision. Have an appointed time for physical culture on your program, and *do not omit it.*

Teachers will find it a great aid if they will carry out, as far as practicable, the general positions in their daily work. General positions are changed in some particulars for a few grades.

Eight counts to each exercise.

After pupils are thoroughly familiar with the exercises, music will be found an advantage, and will keep alive the interest.

Marching will be given to all grades.

"Setting Up Exercises" and a few simple military commands to fourth, fifth, sixth, seventh and eighth grades.

Running, skipping, fancy steps, motion songs, to first, second, third grades.

Musical dumb bell or bean bag drill, fancy steps, motion songs, to fourth grade.

GENERAL POSITIONS—FOR ALL GRADES.

First Position—Sitting.

1. Sit in center of seat.
2. Bodies erect.
3. Heads well up, chin in, eyes to front, mouth closed.
4. Hands clasped on edge of desk, right over left.
5. Feet flat on the floor, heels together, toes turned out.

Rest Position—Sitting.

1. Lean easily back in seat.
2. Hands in lap.
3. One foot back.

Rise from First Position.

1. Drop hands in lap and slide body to edge of seat.
2. Rise in place.
3. Step to center of aisle and take position.

First Position—Standing.

1. Body erect, with hips and shoulders well back.
2. Head well up, eyes to the front, chin well back.
3. Arms falling naturally.
4. Toes turned out, with right foot obliquely in front of left a few inches.
5. Weight on balls of both feet.

Rest Position—Standing.

1. Place right foot about six inches back and rest weight entirely upon it; keep the body erect.

Sit from First Position Standing.

1. Step near the seat.
2. Sit slowly on edge of the seat.
3. Take first position sitting.
4. Rest position.

To Test First Position.

1. Hands on waist, force hips back until toes can easily be seen by bending the head.
2. Hands down, head up.

FIRST AND INTERMEDIATE GRADES.

FIRST SERIES.

First Position—Standing.

1. Test.
2. Relax hands by shaking rapidly in and out, arms in natural position.
3. Same, arms extended shoulder high to front.
4. Same, arms extended shoulder high at sides.
5. Same, arms down at sides.
6. Raise arms to front, shoulder high, relax and drop to position.
7. Same, shoulder high at sides.
8. Raise right leg, thigh at right angle with hip, knee bent; relax, drop to position, ball of foot touching floor.
9. Same with left leg.
10. Breathing exercise: inhale through nostrils; exhale, sound sh.

SECOND SERIES.

1. Test.
2. Close and open hands with force, arms in natural position.
3. Same, arms down at sides.
4. Raise right arm to vertical position, knuckles out.
5. Left arm same; both.
6. Raise right arm to vertical position from side, knuckles in.
7. Left arm same; both.
8. Rise on toes.
9. Bend knees and hips.
10. Breathing exercise: inhale; exhale, sound sh.

THIRD SERIES.

1. Test.
2. Clap hands in front of body.
3. Same, over head.
4. Hands brought to hips and back to position.
5. Hands touching shoulders; position.
6. Hands touching head; position.
7. Hands touching head, shoulders, hips.
8. Hands touching head, shoulders, hips and floor.
9. Alternate clapping hands over head and in front of body.
10. Breathing exercise: inhale; exhale; sound wh.

SECOND GRADE.

FIRST SERIES.

First Position—Standing.

1. Test.
2. Relax hands in and out; up and down; arms in natural position.
3. Same, arms down at sides.
4. Raise arms above head, relax and drop to position.
5. Weight on left foot; extend right; bend foot up and down at ankle.
6. Left foot same; alternate.
7. Right foot back, knee bent, bring to position, ball of foot touching floor softly.
8. Left same; alternate.
9. Rise on toes.
10. Bend knees and hips.
11. Alternate 9 and 10.
12. Breathing exercise: hands on waist; inhale; exhale through notrils silently.

SECOND SERIES.

First Position—Standing.

1. Test.
2. Open and close hands with force, arms in position, extended in front, shoulder high; out at side, shoulder high; down at side.
3. Right hand to hip and down.
4. Left, same; alternate: both.
5. Swing right arm to front, shoulder high.
6. Left, same; alternate; both.
7. Raise right shoulder.
8. Left, same; alternate: both.
9. Hands clasped back of neck, stretch body through eight counts.
10. Clasp hands, swing over head, forming circle.
11. Hands on waist; inhale; exhale, sound sh.

THIRD SERIES.

First Position — Sitting.

1. Clap hands, right over left.
2. Same, left over right; alternate.
3. Relax hands up and dawn, arms at side, shoulder high.
4. Relax hands over head.
5. From position on desk, raise right hand slowly above head and down, eyes and wrist leading.
6. Left hand, same; alternate; both.
7. Bow head forward, just bending neck.
8. Bend head back; alternate.
9. Bend slowly forward at waist until head touches desk; slowly back to position.
10. Breathing exercises: hands on waist; inhale; exhale, sound of k.
11. Rest position.

FOURTH SERIES.

First Position — Standing.

1. Test.
2. Bend forward slowly at waist until fingers touch floor if possible, knees straight; repeat.
3. Swing arms to front, waist high, touching fingers.
4. Same, chest high.
5. Same, over head, arms making oblique circle.
6. Same, over head, making circle at side.
7. Same, back of body, lowest altitude.
8. Alternate 6 and 7.
9. Touch right foot forward.
10. Left foot, same; alternate.
11. Hands on waist, hop lightly on ball of right foot.
12. Same, on left foot; alternate.
13. Breathing exercise: hands on waist; inhale; exhale, with some short sentence.

THIRD GRADE.

FIRST SERIES.

First Position — Standing.

1. Test.
2. Relax hands by rotating at wrists, elbows bent.
3. Same at side.
4. Bend slowly at waist to right, arms hanging.
5. Same to the left; alternate.
6. Raise right arm shoulder high at side.
7. Left arm, same; alternate; both.
8. Cross arms in front of the chest.
9. Same back of body.
10. Alternate 8 and 9.
11. Hands clasped back of body; elbows bent; force down and back.
12. Hands clasped back of neck; force up and down.
13. Keep hands clasped and bring in front of face; slowly down to position.
14. Turn head right.
15. Same to left; alternate.
16. Raise right shoulder.
17. Left same; alternate; both.
18. Breathing exercise: hands under arms; inhale; exhale, silently.

SECOND SERIES.

First Position — Sitting.

1. Arms extended to front, shoulder high, rotate from shoulders.
2. Same over head.
3. Same, out at side.
4. Same, down at side.
5. Raise and bend arms slowly, until tips of fingers touch shoulders; force elbows forward and back.
6. From position of 5 raise hands slowly, relax above head; carry and clasp back of head; stretch through eight counts; bring back to position on desk same way.
7. Rotate head from right to left.
8. Bend slowly at waist until head rests on desk; hands in first position; slowly up.
9. Raise toes of both feet.
10. Raise both heels.
11. Alternate 9 and 10.
12. Spread toes, keeping heels in position.
13. Touch right foot forward.
14. Left, same; alternate.
15. Rest position.
16. Breathing exercise: inhale; exhale, Oh.

THIRD SERIES.

First Position — Standing. Alternate clapping hands with every two counts of each movement.

1. Clap hands, arms extended to front, shoulder high.
2. Hands brought to hips and down.
3. Arms to front, shoulder high.
4. Arms at side, shoulder high.
5. Arms to vertical position over head.
6. Same position from side, knuckles in.
7. Hands brought to shoulders.
8. Hands touching head.
9. Rise on toes.
10. Raise toes, keeping heels on floor.
11. Touch right foot forward.
12. Left, same; alternate.
13. Breathing exercise: hands on chest; inhale; exhale, sound sh.

FOURTH SERIES.

First Position — Standing.

1. Test.
2. Relax hands in and out, arms in natural position.
3. Relax hands up and down, arms down at sides.
4. Raise arms to front, shoulder high; relax and drop.
5. Same, arms extended at side.
6. Raise both arms slowly, shoulder high, to front, wrist leading.
7. Same, arms out at side.
8. Swing right arm curved over head.
9. Left, same; alternate: both.
10. Both hands slowly over head unti fingers touch.
11. In position of 10, rise on toes, then slowly lower arms.
12. Hands brought lightly to shoulders, at same time front stepping exercise.
13. Hands brought lightly to head, at same time take back stepping exercises.
14. Hands on hips, kneel slowly on right knee.
15. Same, on left knee.
16. Listening poise.
17. Pointing poise.

FOURTH GRADE.

FIRST SERIES.

First Position — Standing.

1. Test.
2. Relax hands, rotating at wrists; arms in natural position.
3. Arms to front, shoulder high; relax and drop to position.
4. Relax body from ankles by turning right.
5. Same, to left; alternate.
6. Raise right shoulder.
7. Left, same; alternate; both.
8. Force right shoulder back.
9. Left, same; alternate; both.
10. Right arm to front, shoulder high, palm up; rotate from shoulder.
11. Left, same; alternate; both.
12. Right foot extended; rotate from ankle.
13. Left, same; alternate.
14. Combine front and side stepping exercises, use right foot.
15. Left, same; alternate.
16. Rest position; first position.
17. Breathing exercise: hands on waist; inhale; exhale, ah.

SECOND SERIES.

1. Test.
2. Arms out at side, shoulder high; relax and drop to position.
3. Extend right arm at side, shoulder high, palm up, rotate from shoulder.
4. Left, same; alternate; both.
5. Right hand brought to left shoulder.
6. Left to right shoulder; alternate; both.
7. Bend head to right.
8. Same, to left; alternate.
9. Same, front.
10. Same, back; alternate.
11. Hands on waist, fingers back, bend to right, keep knees straight.
12. Same, to left; alternate.
13. Right foot obliquely forward.
14. Left, same; alternate.
15. Right foot obliquely back.
16. Left, same; alternate.
17. Rest position; first position.
18. Hands on waist, fingers touching; force apart; inhale; exhale silently.

THIRD SERIES.

1. Test.
2. Bend body forward slowly at waist, arms hanging relaxed.
3. Raise right hand under right arm.
4. Left, same; alternate; both.
5. Bend elbows until forearms are parallel with upper arms; bring forearms together in front of chest until elbows meet; pull back across chest to position.
6. From position of 5, throw arms with force to natural position.
7. Carry arms high over head, bring finger tips down to shoulders, elbows out at sides.
8. Same exercise at right face.
9. Same, at right face.
10. Same, at right face.
11. Same, at front face.
12. Rotate right shoulder.
13. Left, same; alternate; both.
14. Hands on waist, fingers touching, bend forward.
15. Same, back; alternate.
16. Rise on toes.
17. Bend knees; alternate 16 and 17.
18. Breathing exercise: inhale; exhale, sound of n; hands on waist.

FOURTH SERIES.

1. Test.
2. Relax hands in and out; up and down; arms in position.
3. Same, arms down at sides.
4. Relax arms from shoulder high in front.
5. Same, at side.
6. Open and close hands with force, arms in position.
7. Same, arms down at sides.
8. Right arm in cirtle over right shoulder, elbow bent, turn and bring back to position; left arm following over left shoulder in quick succession.
9. Same exercise, swing arm over head.
10. Same, back of head.
11. Swing arm in circle out at side and back to position in front of face; elbow straight swing from shoulder.
12. Clasp hands, swing to circle over head and step back with right foot at same time; left foot same; alternate.
13. Touch right foot forward.
14. Left, same; alternate.
15. Touch right foot out at side.
16. Left, same; alternate.
17. Looking poise.
18. Mercury poise.
19. Rest position; first position.
20. Breathing exercise: hands on chest; inhale; exhale, silently.

FIFTH GRADE.

FIRST SERIES.

First Position—Standing.

1. Test.
2. Relax arms at elbows by rotating out and in; in and out.
3. Relax arms from shoulder high at side.
4. Relax body to right from ankles.
5. Same, to left; alternate.
6. Rotate right shoulder.
7. Left, same; alternate; both.
8. Alternate raising right shoulder and extending arm, shoulder high, to right.
9. Left, same; alternate; both.
10. Right arm to front, shoulder high, swing around to side and back.
11. Left, same; alternate; both.
12. Rotate head from right to left, and left to right.
13. Hands on waist, fingers back, bend right; left; alternate.
14. Same, front; back; alternate.
15. Cross right foot in front of left.
16. Left, same; alternate.
17. Rest position; first position.
18. Breathing exercise: hands on waist; inhale; exhale, ah.

SECOND SERIES.

1. Test.
2. Hands on waist, force elbows forward.
3. Same, back; alternate.
4. Right arm, shoulder high, to front; touch right foot forward at same time.
5. Left arm and foot, same; alternate; both arms; alternate feet.
6. Right arm obliquely forward; touch right foot forward at same time.
7. Left arm and foot, same; alternate; both arms, alternate feet.
8. Right arm, shoulder high, at side; touch right foot at same time.
9. Left arm and foot, same; alternate; both arms, alternate feet.
10. Right arm obliquely back, touch right foot obliquely back at same time.
11. Left arm and foot, same; alternate; both arms; alternate feet.
12. Right hand brought to hip; cross right foot back of left.
13. Left hand and foot, same; alternate; both hands; alternate feet.
14. Right hand brought to right shoulder, cross right foot in front of left.
15. Left hand and foot, same; alternate; both hands; alternate feet.
16. Rise on toes.
17. Bend knees.
18. Alternate.
19. Walking exercise.
20. Rest position.
21. First position.
22. Breathing exercise: hands on waist; fingers touching in front; inhale; exhale, silently.

THIRD SERIES.

Repeat Each Exercise.

1. Test.
2. Arms in natural position; relax hands in and out; up and down.
3. Relax arms from shoulder high to front.
4. Bend slowly forward at waist, arms and head relaxed.
5. Raise arms slowly waist high, wrist leading.
6. Same, at side.
7. Same, raise shoulder high, to front.
8. Same, obliquely front.
9. Same, at side.
10. Carry right hand obliquely front, highest altitude, wrists leading; weight on right foot.
11. Same, to left, with left hand up; weight on left foot forward.
12. Same, obliquely back to right.
13. Same, obliquely back to left.
14. Right hand leading toward floor, left back, bend waist and head.
15. Same, left hand leading, weight on left foot.
16. Rest position; first position.
17. Breathing exercise: hands on waist; fingers touching at back; inhale; exhale, sound sh.

Dumb Bells.

FIRST SERIES.

First Position—Standing. Bells at Side.

1. Arms in position, twist bell out and in; full arm movement.
2. Same, waist high, elbows bent and back.
3. Same, arms extended shoulder high to front.
4. Same, arms straight over head.
5. Same, out at side, shoulder high.
6. Same, chest high, elbows bent and back.
7. Same as 2.
8. Same, down at sides.
9. Right bell brought to hip.
10. Left bell same; alternate; both.
11. Right bell to chest and down.
12. Left, same; alternate; both.
13. Right bell to chest and out in front.
14. Left, same; alternate; both.
15. Right bell to chest and over head.
16. Left, same; alternate; both.
17. Swing right bell up, shoulder high, to front.
18. Left, same; alternate; both.
19. Swing right bell up to vertical position over head.
20. Left, same; alternate; both.
21. Breathing exercises: inhale; raise bells slowly, shoulder high, at sides; exhale, lower slowly.

SECOND SERIES.

1. Raise arms slowly to vertical position over head.
2. Hold position of 1, turn to right at ankles.
3. Turn left; alternate.
4. Lower bells slowly to position, making circle out at side.
5. Right bell to left shoulder, across chest.
6. Left, same; alternate; both.
7. Right bell up to arm pit.
8. Left, same; alternate; both.
9. Right bell to arm pit from out at side, shoulder high.
10. Left, same; alternate; both.
11. Bells to chest; out in front; to chest; over head; to chest; out at sides; to chest; position.
12. Strike bells in front of body at lowest altitude, thumb and little finger ends alternately.
13. Repeat 11.
14. Repeat 12 back of body.
15. Ratapian bells four counts; bells on hips, charge forward with right foot; turn head right, hold position four counts.
16. Same as 15; take attitude to left.
17. Same as 15; charge back with right foot.
18. Same as 15; charge back with left foot.
19. Rataplan four counts; charge forward right foot, right bell obliquely above head; lock at bell; left on hip; hold four counts.
20. Repeat 19; attitude to left.
21. Repeat 19; attitude back to right.
22. Repeat 19; attitude back to left.
23. Breathing exercises: raise bells over head; inhale; exhale; lower bells out at side.

SIXTH GRADE.

FIRST SERIES.

First Position — Standing.

1. Test.
2. Transfer weight from left to right foot; bend knee.
3. Same, from right to left foot; alternate.
4. Rise on toes; settle weight on right and left foot alternately.
5. Arms extended at sides shoulder high; clasp over head; down to back of neck and up twice; out, shoulder high; to position.
6. Touch right foot obliquely forward.
7. Left, same; alternate.
8. Repeat 5.
9. Touch right foot obliquely back.
10. Left, same; alternate.
11. Hands touching shoulders, elbows out at side; force forward and back.
12. Touch right foot at side.
13. Left, same; alternate.
14. Both hands brought to hips and down.
15. Cross right foot back of left.
16. Left, same; alternate.
17. Right hand brought to left shoulder.
18. Left hand to right shoulder; alternate; both.
19. Cross right foot in front of left.
20. Left, same; alternate.
21. Raise right arm in curve over head.
22. Left, same; alternate; both.
23. Combine 15 and 17; 16 and 18.
24. Combine 19 and 21; 20 and 22.
25. Rest position; first position.
26. Breathing exercise: hands on waist, fingers touching at back; inhale; exhale, silently.

SECOND SERIES.

1. Test.
2. Relax hands, rotating at wrists out and in; in and out.
3. Same, relaxing forearm, rotating from elbows.
4. Rotate right arm from shoulder.
5. Left, same; alternate; both.
6. Same as 4 and 5, movement reversed.
7. 1, 2, 3, raise right arm to curved position over head; 5, 6, 7, 8, bend to right at waist.
8. Same to left.
9. Repeat 7 and 8.

10. 1, 2, 3, 4, raise arms to parallel, horizontal: 5, 6, 7, 8, turn hands, palms facing; carry around to sides, wrists leading; repeat.
11. Both arms spiral movement; hands making continuous circle over shoulders, wrists leading.
12. Raise arms slowly to horizontal at sides; turn palm up; bend elbows, finger tips touching shoulders.
13. Same as 12, finger tips touching head.
14. Hands touching head; shoulders; hips; at sides; repeat.
15. Charge obliquely right; fold arms, hold two counts.
16. Same to left.
17. Charge obliquely back with right foot; fold arms back.
18. Same, obliquely back to left.
19. Rest position; first position.
20. Breathing exercise: hands on waist, fingers touching in front; inhale; exhale, oh.

Dumb Bells.

FIRST SERIES.

1. Bells brought to hips; turn body to right from ankles.
2. Same, left; alternate.
3. Right bell to chest; alternate, raising above head and lowering to side.
4. Left, same; alternate; both.
5. From chest, force right bell up; left down.
6. Same, left, up; right, down; alternate.
7. Right bell to chest, out in front, palm up.
8. Left, same; alternate; both.
9. A right oblique face, right arm shoulder high at side, swing to vertical position over head, back of hand in.
10. Left, same; alternate; both.
11. Front face; arms to parallel horizontal, pull back with force to chest.
12. Repeat 9 and 10 at left oblique face.
13. Repeat 11.
14. Bells under chin, elbows shoulder high; pull bells across chest.
15. Bells on hips, bend front; back; alternate.
16. Bells on shoulders, raise to vertical position.
17. Repeat 15 at a right face until round to front face.
18. Breathing exercise: inhale, bells brought slowly to arm pits; exhale, silently; lower bells.

SECOND SERIES.

1. Arms in natural position, turn bells out and in..
2. Same, arms at parallel horizontal.
3. Same, over head.
4. Same, out at side.
5. Same, chest high, elbows bent and back.
6. Same, waist high, elbows bent and back.
7. Same, down at side.
8. Right bell to shoulder; out in front, palm up.
9. Left, same; alternate; both.
10. Same as 8, out at side.
11. Left, same; alternate; both.
12. Raise arms slowly to vertical position.
13. Hold position of 12, bend body to right; left; alternate.
14. Lower to position, making circle out at sides.
15. Raise bells slowly to horizontal position at sides, on 5; swing to front, striking thumb ends of bells; lower to position on 6, 7, 8.
16. Repeat 15.
17. Strike thumb and little finger ends of bells alternately, to front, shoulder high.
18. Repeat 17, over head.
19. Repeat 14.
20. Breathing exercise: bells on hips; inhale; exhale, sound sh.

THIRD SERIES.

1. Right hand brought to hip and down.
2. Left, same; alternate; both.
3. Right bell to chest.
4. Left, same; alternate; both.
5. Right bell to shoulder, thumb end down.
6. Left same, alternate; both.
7. Left bell horizontal position at side, right same position to the front.

8. Same as 7, position of arms reversed.
9. Right arm vertical position over head, left horizontal to front.
10. Same as 9, position of arms reversed.
11. Right arm to arm pit, left horizontal at side.
12. Same as 11, position of arms reversed.
13. Right bell to shoulder, left horizontal at side.
14. Same as 13, position of arms reversed.
15. Right arm shoulder high in front, left bell to hip; touch right foot forward at same time.
16. Same as 15, using opposite arm and foot
17. Right arm shoulder high at side. left bell to hip: right foot at side same time.
18. Same as 17, using opposite arm and foot
19. Bells on shoulder, hold position and cross right foot in front of left; left, same; alternate.
20. Bells back of body at waist line; hold position and cross right foot back of left; left, same; alternate.
21. Bells back of neck; force elbows back and front.
22. Same, bells back of body at waist, palms out.
23. Bells up from chest, rise on toes at same time.
24. Bells down from chest, bend knees at same time.
25. Alternate 23 and 24.
26. Right bell vertical position over head, left bell on hip; bend body and head slightly left; look at right bell; hold 8 counts.
27. Same, to left.
28. Charge forward right foot, right bell extended highest altitude, left bell back, lowest altitude; look at right bell; hold 8 counts.
29. Same, to left; back to right oblique; back to left oblique.
30. Breathing exercise: inhale; retain breath; rataplan with bells 8 counts; exhale, silently.

SEVENTH GRADE.

FIRST SERIES.

First Position — Standing.

1. Test.
2. Relax arms, rotating at elbows out and in: in and out.
3. Raise arms shoulder high, to front, and relax.
4. Same, at side.
5. Raise right shoulder.
6. Left, same; alternate; both.
7. Tips of fingers on right shoulder; upper arm shoulder high, at side; rotate shoulder.
8. Left, same; alternate; both.
9. Raise right arm shoulder high, to front; swing round to side
10. Left, same: alternate; both.
11. Hands clasped back of neck, raise and lower arms.
12. Hands clasped back of body at waist line, lower and raise hands.
13. Raise right arm to front, shoulder high; left at side, shoulder high.
14. Reverse position of arms; alternate.
15. Right arm vertical position over head; left at side, shoulder high.
16. Reverse position of arms: alternate.
17. Right arm curved over head; left brought to hip.
18. Reverse position of arms; alternate.
19. At right oblique face, swing arms over head, fingers touching; repeat at an oblique face until around to front.
20. Alternate, touching right foot obliquely back and crossing back of left.
21. Left, same; alternate.
22. Raise right heel; bend knee.
23. Left, same: alternate.
24. Hands on hips, alternate rising on toes and bending knees.
25. Transfer weight from left to right foot and right to left; alternate.
26. Walking exercise.
27. Rest position; first position.
28. Breathing exercise: hands at waist, inhale; exhale, oh.

SECOND SERIES.

1. Test.
2. Bend body to right. arms relaxed.
3. Same, left; alternate.
4. Relax hands in and out, up and down.
5. Rotate right arm at shoulder, from right so left, making full circle in front of face.
6. Left, same; alternate; both.
7. Hands to hips and down.
8. Hands brought to shoulders in circle.
9. Raise arms slowly over head until fingers touch; down slowly.
10. Same as 9; hold position and rise on toes.
11. Hands in front of chest; relaxed; elbows bent and out at sides; bring hands over shoulders; extend at sides, palms back; hold position; rise on toes; lower arms slowly.
12. Clasp hands, raise over head; unclasp, lower slowly obliquely back and to position.
13. Hands clasped over head; hold position; turn head right; left; alternate
14. Right arm curved over head, left hand to hip; cross right foot in front of left
15. Reverse position of arms; use left foot; alternate.
16. Charge right foot forward, hands to hips; turn head right; hold 2 counts; same to left.
17. Charge right foot forward; alternate raising arms to front, shoulder high, and to arm pits; same to left.
18. Step back with right foot; raise right hand relaxed over head, left hand to hip; bend body and head slightly left; look at right hand; hold 8 counts.
19. Same, to left, position of hands reversed.
20. Breathing exercise: inhale; retain breath, raise arms shoulder high at sides, 8 counts; exhale.

Wands.

FIRST SERIES.

First Positton—Standing. Wand held at side by thumb and first two fingers of right hand.

1. Lower wand, 1, 2, 3.
2. Raise wand to chest.
3. Right hand to left shoulder.
4. Left hand to right shoulder; alternate.
5. Raise wand shoulder high to front.
6. Wand to chest and out in front, shoulder high.
7. To chest and overhead.
8. To chest and out to right, shoulder high.
9. Out left from chest; alternate.
10. (1) Wand to chest; (2) out in front; (3) to chest; (4) down to position; (5) to chest; (6) over head; (7) to chest; (8) to position; repeat.
11. (1) Wand to chest: (2) shoulder high, to right; (3) to chest; (4) down to position; (5) to chest: (6) out to left; (7) to chest; (8) to position; repeat.
12. Raise wand slowly over head, back of head to shoulders, 8 counts; lower to position slowly.
13. Breathing exercise: inhale while raising wand slowly to chest, elbows bent at sides, shoulder high; exhale, lower wand.

SECOND SERIES.

1. Wand brought to chest, elbows bent at sides, shoulder high.
2. Raise wand obliquely, downward to left, right arm level with shoulder, right arm downward in front of body.
3. Same to left, position of hands reversed; alternate.
4. Left end of wand to chest, right arm obliquely forward.
5. Same, reverse position of arms; alternate.
6. Wand horizontal position, shoulder high to front; twist wand, right hand above left.
7. Same, left hand above right; alternate.
8. Make square; left hand to right shoulder, wand across chest, at left side; down to position.
9. Repeat square to left side.

10. Raise wand to front, shoulder high; touch right foot forward at same time: left foot forward; alternate.
11. Wand to right, shoulder high; touch right foot at side; left, same; alternate.
12. Wand horizontal position to front, shoulder high; twist wand, right hand above left; cross right foot in front of left; left hand and foot, same; alternate.
13. Raise wand slowly until across shoulder blades; alternate bending to right and rising on toes.
14. Same as 13, to left; alternate.
15. Wand same as 13, alternate bending forward and rising on toes.
16. Same as 15, bend back; alternate.
17. Breathing exercise: keep wand across shoulder blades; inhale; exhale, lower wand.

THIRD SERIES.

1. Raise wand slowly to horizontal position over head.
2. Hold wand in position of 1; turn body to right from ankles.
3. Same, left; alternate.
4. From position of 1 to chest.
5. To shoulder blades; alternate.
6. Lower wand to chest. Following movements from chest:
7. Left hand to right shoulder; right arm vertical position.
8. Same, position of hands reversed; alternate.
9. Right arm obliquely up; left hand to right shoulder.
10. Left, same: alternate.
11. Right arm obliquely down; left hand to right shoulder.
12. Left, same; alternate.
13. Right arm obliquely forward, left hand to right shoulder.
14. Left arm obliquely back, right hand to left shoulder; alternate.
15. Left arm obliquely forward, right hand to left shoulder.
16. Right arm obliquely back, left hand to right shoulder; alternate.
17. Charge forward right foot; rowing motion with wand, out and back to chest, making circle under.
18. Same, left foot forward; alternate.
19. Raise wand to horizontal position over head; down to chest; repeat at right face until around to front face.
20. Charge forward right foot, wand over head; hold 2 counts; lower to position in front of body.
21. Same, to left; alternate.
22. Same, back to right.
23. Same, left; alternate.
24. Breathing exercise: inhale; retain breath; bring wand to chest, eight counts; exhale, silently.

EIGHTH GRADE.

FIRST SERIES.

First Position — Standing.

1. Test.
2. Relax arms from shoulder high to front.
3. Same, from shoulder high at side.
4. Relax body to right from ankles.
5. Same, to left; alternate.
6. Alternate raising right shoulder and forcing it back
7. Left, same; alternate; both.
8. Rotate right shoulder.
9. Left, same; alternate; both.
10. Alternate forcing right shoulder back and raising arm shoulder high to front.
11. Left, same; alternate; both.
12. Alternate raising right shoulder and raising arm out at side.
13. Left, same; alternate; both.
14. Hands on shoulders, force elbows forward and back.
15. Bend head to right; forward; left; back; repeat.
16. Rotate head from right to left and left to right.
17. Hands on waist, bend right; forward; left; back; repeat.
18. Touch right foot obliquely forward; at side; obliquely back; cross back of left; left foot same.
19. Rise on toes; settle on right and left foot alternately.
20. Charge right foot obliquely forward, hands brought to hips; hold two counts.
21. Same to right, turn body right.

22. Same, obliquely left.
23. Same to left side, body left.
24. First position; rest position.
25. Breathing exercise: hands on waist, fingers touching back of body; inhale; exhale, oh.

SECOND SERIES.

1. Test.
2. Hands on waist, turn body to right at ankles.
3. Same, to left; alternate.
4. Hands on waist, weight on ball of right foot; bend knee down and up.
5. Left foot, same; alternate.
6. Raise arms shoulder high to front, palms facing; turn palms out; carry around to horizontal at sides, rise on toes at same time; arms back to front position, lower heels at same time.
7. Hands to hips and down; to shoulders; out at sides; folded back of body; repeat.
8. Bend elbows until forearms are parallel with upper arms; touch forearms together in front of chest; pull back across chest.
9. From position of 8, throw arms with force to natural position.
10. Alternate crossing right foot in front of left and bending knees.
11. Left foot, same; alternate.
12. Charge right foot forward; fold arms; extend arms out at sides: down to position; step back to position; repeat.
13. Same, charge forward with left foot.
14. Charge forward right foot, extend right arm at side, palm front, left arm across chest; hold, charge and execute movement of arms alternately, extending right and left arm, other arm across chest.
15. Same, charge with left foot.
16. Charge with right foot, hands on waist, right knee bent; bend back at waist, exercising muscles of abdomen; same, left foot charge.
17. Charge back right foot, hands curved over head, palms front; hold eight counts; same, left foot back.
18. Walking exercise.
19. Rest position; first position.
20. Breathing exercise: inhale while raising arms in front of chest relaxed; elbows shoulder high at sides; retain breath while hands are brought over shoulders and extended at side, palms back; hold position, rise on toes, four counts; exhale, lower arms slowly at sides.
21. Breathing exercise: inhale; raise and lower arms slowly at side, rhythmical movement, wrist leading; exhale.

Wands.

FIRST SERIES.

1. Wand from carry to position in front of body, 1, 2, 3.
2. Wand to chest and down.
3. Wand to chest, elbows shoulder high at side.
4. Alternate 2 and 3.
5. Alternate raising right hand to left shoulder, and left to right.
6. Raise wand slowly above head; to shoulder blades, eight counts.
7. Same position as 6; alternate bringing wand to chest and shoulder blades.
8. Wand across shoulders, turn body to right at ankles.
9. Same, to left; alternate.
10. Bend right, at waist.
11. Same, left; alternate.
12. Bend forward at waist.
13. Same, back; alternate.
14. Raise wand above head to horizontal position.
15. From position of 14, wand to vertical position at right side.
16. Same, left; alternate.
17. Wand to chest slowly.
18. Wand forward and back to chest; alternate touching right and left foot forward.
19. Alternate extending wand to right and left side from chest, alternate movement of feet at same time.
20. Breathing exercise: inhale while raising wand over head; retain breath, bring wand to shoulders, 8 counts; exhale while lowering wand to position.
21. Rest position.
22. Carry wands.

SECOND SERIES.

1. Right end of wand obliquely out, shoulder high: left end to waist.
2. Reverse position of hands: alternate.
3. Same, left hand brought to base of neck.
4. Same to left, position of hands reversed; alternate.
5. Same as 1 and 2, touching right and left foot forward at same time.
6. Same as 3 and 4, touching right and left foot back.
7. Wand in front, shoulder high; twist wand, right hand over left; cross right foot in front of left at same time.
8. Same, left hand and foot; alternate.
9. Wand slowly to position back of shoulders.
10. From position of 9, force right hand up.
11. Left, same; alternate; both.
12. Wand back of shoulders; bend right: front; left; back: position.
13. Wand in same position; charge forward with right foot, hold 2 counts.
14. Same, to left; alternate.
15. Wand brought slowly to position.
16. Charge forward right foot, bring wand to chest at same time; rowing motion of wand, sway body from right to left foot.
17. Same, to left.
18. Same as 16, charge back; bring wand under to chest instead of over.
19. Same as 18, to left.
20. Charge forward right foot, wand high over head, hold 2 counts.
21. Same, to left; alternate.
22. Same, charge right foot back.
23. Same, back to left; alternate.
24. Breathing exercise: inhale while raising wand above head; exhale, sound sh while lowering wand to position.
25. Rest position; first position.
26. Carry wands.

THIRD SERIES.

1. Wand in position in front of body, clasp with knuckles toward body.
2. Wind wand to right side.
3. Same, to left; alternate.
4. Wind right hand obliquely out, left hand to waist.
5. Same, to left; alternate.
6. Same, shoulder high to right.
7. Same, to left; alternate.
8. Wind wand obliquely down to right, left hand to waist.
9. Same, down to left; alternate.
10. Wind out to right side, shoulder high.
11. Same, to left side; alternate.
12. Wind wand obliquely back to right, shoulder high, left hand to chest.
13. Same, to left; alternate.
14. Wind out to right side, shoulder high; left hand back of head.
15. Same, to left; alternate.
16. Wind wand obliquely right; touch right foot forward at same time.
17. Same, to left; alternate.
18. Wind obliquely back to right; step right foot back.
19. Same, left; alternate.
20. Wind down to right side; step right foot back.
21. Same, to left, alternate.
22. Rest position; first position.
23. Carry wands.

ENRICHMENT OF RURAL SCHOOL COURSES.

At the Chicago meeting of the Committee on Rural Schools the undersigned were appointed a subcommittee to report, in the form of an appendix, a scheme for the enrichment and vitalization of the work of the rural schools by means of subjects drawn from rural life and surroundings. We do not deem it our province to discuss the theory of the rural school programme, much less the broader problems of the country school. It may, however, conduce to a better appreciation of what we suggest if we frankly state at the outset the assumptions on which we have proceeded.

We take it for granted that the work of every school, rural or otherwise, should embrace subjects drawn from its environment and from the life of its pupils. We assume that it should do this —

Because children should be taught to gather culture, knowledge, and inspiration from everything with which they come in contact.

Because children should acquire the habit of bringing to bear their knowledge and their mental powers upon every subject of thought that falls within their experience.

Because the study of the environment is especially effective in discipline and inspiration, since it is tangible, vivid, and impressive, and awakens strong and clear concepts, and produces deep and lasting educational effects.

Because mental acquisitions thus associated with the environment will be constantly revived by recurrent contact with it, and will thus be refreshed and kept alive and effective.

Because the basis for a successful study of the unseen and the intangible is best laid in clear and strong impressions of things seen and realized.

Because the school work is thereby made directly serviceable to the work of life, the value of immediate and practical utility being added to superior disciplinary and inspirational values.

Because it puts life and soul into the work.

Because it serves as a bond of sympathy between the out-of-school life and the in-school life.

Because, in time (perhaps not at once, while inherited prejudices last,) it will become a bond of sympathy between the patrons of the school and the work of the school.

We assume that a rural school, to be a true *rural* school, must take tone and color from rural surroundings, and must contribute directly to the enrichment and inspiration of rural life. We believe that this will aid in giving meaning and attractiveness to life in the country.

The following suggestions are offered in the hope that they may be helpful to teachers in making use of rural surroundings to enrich the work of country schools and to give vividness to the various formal studies. Our space being severely limited, it has seemed best to develop a few topics with some little fullness and let these suggest the treatment which others may receive. Those which we have been forced to neglect are quite as important and as rich in good material as the ones more favored. All are treated too scantily. What is really needed is a series of primers or a manual carefully worked out, embracing information as well as suggestions. But perfected tools come only with a perfected trade. The pioneer work must be done with poor implements. The progress of the work will bring better facilities.

We shall certainly be met with the criticism that the suggested work is impracticable, that the teachers cannot carry it out. This is far too

true, but not wholly true. A success here and there will be a center of education, and from such beginnings, even though they may be small and scattered, the good work may grow. It must start somewhere and somehow, or must have many little starts in many places and in many forms. This little appendix does not hope to be anything but a passing contribution to an evolution that must be long and doubtless slow. The gravest difficulty lies in the defective education of our teachers. To remove this we would urge every normal school to give elaborate courses in the lines here suggested, and to recognize in other ways that the rural school furnishes a distinct problem that must be solved in its own way. It may be that the establishment of rural normal schools is the mode of solution. We would urge agricultural colleges to give short courses on rural science for the special benefit of country teachers, and to educate the people, through their institutes and by other means, to appreciate and to require the adaptation of the rural schools to rural needs. We would urge upon the agricultural colleges the adaptation and publication of matter on rural science and rural economy suitable for educational uses.

We begin our suggestions with the surface features, partly because a study of them is a natural foundation for that of the remaining environment, and partly because it is directly tributary to one of the leading formal studies.

I. STUDIES UPON THE SURROUNDING LANDSCAPE.

These should be found helpful (1) as a foundation for geography; (2) as a basis for imagining the aspects of other regions which must be studied through maps, descriptions, etc.; (3) as good material for oral and written descriptions, and hence as a basis for language work; (4) as a means for the culture of the sense of beautiful, thus furnishing a rational basis for modeling, painting, and drawing; (5) as a mode of teaching the significance of things usually regarded as meaningless; (6) as an unconscious introduction to geological processes, and (7) as an aid to understanding many matters of agricultural interest.

1. *Surface Features, their Nature, Origin, and Meaning.*— Let there be a general study of the landscape of the neighborhood and a series of talks upon it for the purpose of gaining a true conception of what a landscape really is, and of laying the ground-work for comparisons with other parts of the face of the earth. The children should gain a vivid and definite idea of the nature of their own landscape as a type; if it be plain, whether it be very plain or but partially so; if undulatory, whether it be gently or strongly undulatory; if hilly, whether gently or roughly hilly; if mountainous, whether of the rounded, the rugged, or the grand type.

From the general survey of the landscape, descend to its larger elements.

Note and plot * the hills and valleys of the neighborhood, first taking up those near and then reaching our farther and farther, so that there shall be a gradual passage from those that are familiar to those that are only occasionally or distantly seen. From these it will be a relatively easy step to those which must be wholly imagined. Thus the child is lead out easily and naturally from his own environment to the general geography of the earth. In carrying this out, walks and occasionally more considerable excursions will introduce the idea of travel and of the methods by which geography is made, and, if verbal and written descriptions, sketches and maps are required, the children are started right in their geographical work by being made young geographers themselves in a limited sense. Seeing and learning thus just what geography is, experiencing for themselves just how geography is constructed, they can use their text-books intelligently and appreciatively.

From the general features descend to particulars. Note the way hills and valleys are related to each other. Are the valleys put in among the hills in any regular order or not?† As early as it may seem prudent raise the question of the origin of the hills and valleys, but do not be too hasty about answering it. Let the children gradually work it out. Were the hills built up, or were the valleys cut out? Let them ponder upon this question and see if they do not find the answer to it in the hills and valleys themselves. In leading up to this question, direct the children's observation to what is actually taking place. Are the valleys being built up, or are they being cut down? What is happening in the valleys? What is happening on the roadside? Suggest to them to observe the gullies and to contrast the new gullies with the old gullies. How do the new gullies pass into the old gullies? What is the difference in form between the new and the old? Which are most like the valleys?

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* It will be understood throughout that the work indicated should be done as largely as practicable and advisable by the children themselves, but the teacher will do well at times to lead them by example as well as instruction. The special mode of carrying out these suggestions must be left to the discretion and resources of the teacher. Our effort is only to point out certain main lines which, of course, need not be followed closely. The teacher will often find a different way preferable for himself, and will always find much to be filled in, and perhaps more or less to be left out as not adapted to the particular school or to its surroundings.

† In the region of the glacial drift there is often no regular relation between the hills and valleys, but in other regions the hills are genenally (not always) simply that part of the surface that has not been carried away in the wearing out of the valleys, and this idea that the valleys are worn out by the wash of the land is the one to be implanted in the children's minds, as it is the germ idea of the formation of most rolling surfaces. In some plain regions the valleys have not been worn out enough to form hills, and we have only a plain with trenches cut into it. In such cases it will be very easy to show the children how the valleys have been formed by the streams and by the land wash. In the glacial regions the hills and valleys may be quite irregular, and it may not always be easy to explain them, unless the teacher is exceptionally well informed on the subject.

Lead them on thus to see how a trench may be gradually widened and rounded into a valley. Lead them to observe how tributary gullies arise along the sides of the principal ones, and how they grow by widening themselves and by eating back on either side. Lead them to see that, if such creeping backwards and such rounding of the slopes were extended long enough, they would result in little valleys separated by ridges. Lead them on to note how the tributary valleys by eating back may at length cut through the top of the ridge and divide it into hills, and by deepening separate the hills more and more; and so on, step by step, until the children acquire a tangible conception of how valleys with intervening ridges, and, at length, intervening hills, are formed. From this miniature mode of forming a landscape it is an easy step to the comprehension of the way in which the larger valleys and larger hills, that make up the landscape around them, were produced. When this conception is fully acquired. a firm basis has been reached for understanding the formation of landscapes generally. And not only this, but the landscape comes to have a meaning where before it was quite meaningless, and it is the significance of the things by which we are surrounded that gives soul to intellectual life.

References:

American Geographical Series.
The Report of the Committee of Ten.
Davis on "Geography in the University," *Journal of Geology.*
The Journal of School Geography.
See also, list of books for rural schools and communities.

2. *The Study of Streams.*— Lead the children to observe just how streams flow, how the current plunges into one bank and then is turned about and plunges into the other bank; how it cuts back the bank where it strikes it; how it digs down into the bottom in certain places; how it heaps up material in other places, etc. As they observe, lead them to reason upon what they see and apply it to the study of maps. They will readily come to understand how the bends are made longer and why a stream meanders. They will thus be led to see the meaning of the tortuous courses of streams. Induce the children also to note the work of temporary streams (*e. g.*, after showers) along the roadsides, in the valleys, and on the slopes of the fields. Have them notice the wash from the surface of the land, and thus lead on to the work of water transportation. Lead them to note that this matter lodges elsewhere, and thus approach to the work of deposit. By seeing when and how this wash lodges they will understand the modes of deposition; the formation of deltas, and the building of bars and spits in the streams, the formation of "bottoms," etc.

To approach the origin and maintenance of streams, direct the children to observe what takes place after a rain; if light or slow, that

all water goes into the ground ; if heavy and rapid, that some goes into the ground but much runs away. The latter makes surface streams, but they don't last. Follow the water that goes into the ground. Direct attention to underground water as shown by wells, and connect this with the rain that soaks into the ground. Have the children bring together the depths of the wells at their different homes. Raise the question whether the wells go down as low as the nearest streams. (It will be found almost invariably that the water in the wells is higher than in adjacent streams, except in occasional flood stages.) Then draw out the general principle that the underground water is higher than the streams, being only the rain water on its slow way through the ground to the streams, and that it is this water which works out to the surface in the low valleys and keeps up the supply of the living streams. The dry valleys lie above this underground water, and hence they are not constantly filled. Water only runs in them after showers. The wet valleys lie below the surface of the underground water, and hence it seeps out or comes forth in springs. The children will easily understand how the seeping out makes bottom lands wet and marshy.* The principles here brought out will be helpful later in settling questions of water supply, drainage, etc.

3. *The Study of Soils.*— Incite the children to carefully examine the soil to see how it is made up. Have them wash some of it so as to separate the fine material from the coarse. Direct attention to the natural assorting done by water in the gullies, on the slopes, and in the valleys, and how, on the other hand, fine mud is laid down in the "bottoms" and elsewhere, and thus lead them to see how soils become coarser or finer according to conditions. In most places it will be easy to find pieces or beds of rock partly decayed, and to show that this rotted rock is much the same as soil. From this they may be led on to understand that soil is usually but decayed rock. This will be easily accomplished in regions where the rock lies but little below the soil and the latter graduates down into decaying rock, showing the stages of the process. Induce them to note how the leaves, grass, etc., decay and turn black, and thus lead them on to see that the dark part of the soil comes chiefly from the decay of vegetation. Induce the children to observe the different qualities of soils in different situations ; the soils in the valleys, on the slopes, and on the hilltops, and lead them to see how the wash of the surface affects the soil ; also how the vegetation affects the soil ; and how the soil effects the vegetation. Teach them to notice the difference between wet soils and dry soils ; the swelling and softness when wet, the shrinking and hardness when dry ; also the swelling when frozen and the softness on thawing ; the effects of the ants, worms, and burrowing

* Much marshy land is, however, due to the catching of the surface waters in basins that have no sufficient outlet.

animals in bringing bottom soil to the top, letting in air, etc.; likewise the effects of the roots of plants in opening up little tubules, which are often left open when the roots decay, and so lead on to the idea of porosity and of the penetration of the soil by air. With the older students the fact that the air goes into the ground when the barometric pressure is great, and comes out when the barometric pressure is light, the "breathing of the soil," may be taught, and its importance urged. Teach the children to observe the difference in the dryness of cultivated and uncultivated soil, of hard soil and mellow soil; and so lead on to the utility of the culture in permitting air and moisture to go in, etc.

Starting again with decay of rocks, lead the children to see that some parts of the rocks do not decay readily, and hence bits are left, and that these are washed about and form grains of sand or pebbles. Let them observe these and see that some are well-rounded and some are angular, according to the amount of wear, and thus the origin and meaning of sand or pebbles will become evident. The rolling action of brooks and rivers and of lake and seashores will be manifest. With a thermometer interesting experiments on the temperature of soils when wet and dry, when hard and when mellow, when stirred and unstirred, etc., can be made.

References:

"The Soil," by F. H. King. The Macmillan Co.
"Rock-Weathering and Soils," by George Merrill. The Macmillan Co.
"The Formation of Vegetable Mold," by Charles Darwin.
See also list of books for rural schools and communities.

II. APPLICATIONS OF LANDSCAPE STUDIES.

The study of the features of the landscape may be followed by a study of their influence on human affairs, and on the distribution of plants and animals. The following are some of the lines along which this may be carried out:

1. *The Location of Homes.*— Relative merits of different situations, such as summits, slopes, valleys, etc.; of different exposures, as southerly northerly, etc.; of different relations to woods, openings, outlooks, etc.; of relations to springs, streams, and other bodies of water; of access to highways or to the several parts of the farm, and the bearing of the surface features on such communications. Do the sites of the later dwellings differ from the earlier? Are there discernible reasons for change? What determined the selection of the material of the first generation of houses? Does the material change with successive generations, and, if so, why?

2. *The Location of Roads.*— How far are they influenced by surface features? How far by other considerations? Distinguish wise and un-

wise locations. What is the effect of wash, drainage, etc.? What changes of location or of method of maintenance may be recommended ?

3. *The Location of Adjacent Towns and Villages.*— Study the reasons for their particular situations. What bearing had natural means of transportation, roadway crossings, rivers fords or bridges, special agricultural or mineral resources, mill sites and like features upon their location ? Do the dates of their founding, the rates of their growth and other features of their history show wisdom or unwisdom in their location ? Note the bearings of their location on the interests of the surrounding country.

4. *Development of the Region as Affected by its Environment.*— Study the nature of adjacent manufactories and the reason for their location. What class was first developed, what later, what changes have taken place ? Has there been increase or decline, and what is its meaning ? What is their importance and the value of their products ? How do they affect the rural interests ? What sources of power are used and what remain still unused ? Note the favorable and unfavorable features in the physical conformation ; the presence of mines, quarries, the facilities for transportation by roadways, streams, canals, railways, etc., and their bearing upon the development of the region.

5. *Social and Civil Life of the People as Affected by Surrounding Physical Features.*— Are the physical surroundings favorable to social gatherings and social life ? Do the surface features lead to sparseness of dwellings, roundabout and difficult roads, or the opposite ? Do they make the earning of a living easy and give time for social intercourse, for education, etc.? How do they affect the character of the people, etc.?

6. *The Distribution of Vegetation as Influenced by Surface Features.*— Sketch the timbered, prairie, marsh, and "bottom" areas. Note the effects of slopes, drainage, soils, etc., upon these. How do the physical conditions affect the roots, stems, leaves, and general forms of plants ? Note the adaptation of different areas to different crops ; also the adaptation of the region to different kinds of industry, *e. g.*, grazing, grain raising, etc. Note the changes in vegetation and compare the original with the present vegetation. Discuss the removal of forests. Where was timber first removed, and what timber ? Where is it now reserved and why ? Note the earlier and the later uses of timber supply, and the variation of prices and of uses of timber.

III. THE STUDY OF ATMOSPHERIC PHENOMENA.

In a manner analogous to the foregoing all the features of the air and sky *within the observation of the children* may be treated with interest and profit ; the air itself, the winds, the clouds, rain, snow, hail, thunder, lightning, heat, cold, dew, evaporation, etc. The keynote should be ob-

servation, followed by inquiry, reading, reasoning, forecast, etc. The systematic prediction of tomorrow's weather at the close of each day will greatly stimulate acute observation of delicate features of cloud, wind, etc., and will build up that judgment of weather which is so important to the farmer.

It is urged that teachers secure from the nearest weather bureau station copies of the daily weather maps, and copies of the monthly summaries of the weather and crop conditions of the United States. A careful study of these maps and summaries, *supplementing the pupils' own daily observations*, will form a good basis for other geographic study. The data furnished by the Weather Bureau are particularly valuable for several reasons: (1) They are collected by trained observers; (2) the stations are so distributed as to fairly represent the whole country; (3) observations are uniformly and regularly made every day at all stations; (4) the various meteorological conditions are automatically recorded by instruments of precision, insuring great accuracy of detail; (5) the various data are appropriately represented daily upon one map which, thus, day by day presents a clear picture of the climatic and crop conditions of the whole country.

By these means the pupils will be much interested in working out the relative amounts of rainfall, cloudiness, and sunshine; also the average and the extremes of temperature found in the areas and belts devoted to the great crops, as wheat, corn, oats, tobacco, cotton, and sugar cane. The relative amounts of rain, cloudiness, and sunshine for the seasons may be readily determined. The incidents of the season in the localities where the pupils live frequently afford excellent opportunity for forming a picture of other localities far removed from their own. Thus a study of the character of the rain and the clouds in winter gives a basis for picturing arctic regions, and the same study in summer an equally sound basis for picturing tropical regions. For example, in June, 1892, there was a fall of nearly eleven inches of rain at Chicago; with the summer temperature, an almost tropical verdure was the result. In September and October in Chicago, in 1891, the rainfall was about two-thirds of an inch; this closely approximated the average precipitation in Arizona, and, when considered in connection with the unusually high temperature of the year, it became an easy matter for the pupils to picture desert conditions and modes of desert formation. By similar means the study is capable of almost indefinite expansion.

IV. THE STUDY OF PLANT LIFE.

In like manner, the plants of the region may be treated. The purpose here, as before, is not so much to learn *about* plants as to come into *actual intellectual contact* with them by observation, interest, sympathy, and appreciation. Not only should the plants be observed in all their parts and functions, but their history, mode of propagation, preferences

for soil, topographic situations, exposures, etc., should be studied. The association of plants with one another —"plant societies"— are especially interesting and profitable for study. The cultivated as well as the native plants should be included, and the reasons for cultivating some plants and neglecting or warring against others afford large possibilities of interest. As farming is essentially plant culture, the vital relations of such studies are evident, if carried out on the right lines. The old-fashioned botany, the grinding out of the Latin names by an "Analytical Key," is not at all the thing here urged, but direct inquiry into the nature, life, habits, functions, associations, and services of plants.

To give a more concrete idea of what we have in mind, the following is offered as an illustration. It is not set up as a model. There are many ways of reaching like results.

1. *Growth from the Seed.*—With several seeds (beans, for example) in the hands of each pupil, invite a careful inspection of their surfaces, as a first step. Write upon the board a list of things observed, *e. g.*, (1) stem scar (hilum), (2) small dot on one side of hilum where pollen tube entered to fertilize the seed (micropyle), (3) ridge on side of hilum opposite from micropyle (radicle), (4) one end of bean has different slope from the other, (5) a light line or ridge extending longitudinally around the seed, etc. Request pupils to bring other varieties of beans, and see how many of the observed points are common to them all. As a training in the *exact* use of words in oral expression require the pupils to describe precisely what has been observed. As a training in written language require the pupils to write out what has been seen. This will react to *intensify* the seeing.

To introduce the quantitative element, let a pint cup, or a straight-sided bottle, or a glass be exactly half-filled with beans, and mark the surface of the beans with a string or rubber band. Now fill the vessel with water and put in a warm place for twenty-four hours. Set some pupil to watch the first stages of change, and charge him to be able to state the next day just what they were. On the next day measure the amount of change in volume. What has caused this change? If the water put in was first accurately measured or weighed (and every country school should have means of measuring and weighing), pour out what remains and measure it. Compute the difference. Compare the loss of the water with the increase of the beans. What has become of the water? By what means have the beans grown? Here are the first steps of growth.

Distribute the swollen beans among the pupils, and let them again look for the points observed in the dry bean. Have any disappeared? Have others appeared? Have any changed in character? Let the skin be removed. What features previously noted are removed with it? Do you now see an explanation of any features noted on the outside? Carefully note the two seed leaves (cotyledons), the radicle, and the now very

evident first two leaves. Study the pea, pumpkin seed, and corn in the same manner.

As a next step, fit two layers of thick cloth to the inside of a round pie tin. Wet these pieces of cloth and place between them some of the seeds which have been studied, and turn the two pie tins together to prevent evaporation (which introduced a slight error in the experiment above). Place these in a warm place to germinate, noting the temperature. Encourage some pupil to repeat the experiment in a place where the temperature is between 32 degrees and 45 degress, recording the temperature from time to time. Urge another to try the experiment, using cloths wrung out very dry. Compare results to find out the effects of heat and moisture. Try different seeds to see what differences of conditions they require. These are capital experiments which fix the foundation principles of moisture and temperature in plant growth.

When these tests have sufficiently advanced, urge the boys and girls to request permission to test the germinatory power of the seeds which their parents expect to plant in the spring. (This seed study is best done from February to April.) Place 100 seeds of a given kind under the conditions described, and note how many sprout in three, four, five, etc., days. All seeds should be tested before planting, and this is practical work which, if rightly done, will be appreciated by parents as being immediately useful as well as instructive and disciplinary.

2. *Growth from Buds.*—When vegetation begins to start in the spring, make an excursion at noon or after school to gather specimens of large buds. Clip sprigs of the Balm of Gilead, cottonwood, or hickory, set them in water and study in the manner of the bean, and so reach the fundamental idea that the bud and the seed are in nature much the same. Pick off the scales one by one until the leaves are reached, inquiring what the scales are for; what the cotton; what the varnish. Count the number of true leaves, and then go a little later to the trees again and see how many leaves the shoots from similar buds then have. Are they the same in number as in the buds? Or have new ones formed? When were these buds formed? Why were they formed the year before? Let the children ponder over these questions.

Study the arrangement of buds and of leaves on the stems. Lead the children to discover the law that buds and leaves are placed as far apart on the stem as possible, and in a symmetrical order. Lead them to discover that this order places the leaves where there is the least shading, where the movements of the sap up and down feed all leaves and branches quite equally, so that the stem will be equally loaded on all sides. Let them learn to distinguish fruit buds from leaf buds. Have them explore the gardens and orchards to see if there is an abundance of fruit buds. Teach them to distinguish between live and dead buds, particularly in regard to fruit trees. All this should be done with a

definite educational purpose, in which the utility of the knowledge has also a clear recognition.

References:

"Principles of Plant Culture," Professor C. S. Goff. Published by the author, Madison, Wis.
"Flowers in Relation to Insects." The Macmillan Co.
Gray's Botany.
Bessey's Botany.
See also list of books for rural schools and communities.

V. THE STUDY OF ANIMAL LIFE.

Along essentially the same lines the animal life may be treated. Here a new and important factor enters, conscious life, and this affords a most fruitful field for educating the sympathies and moral sentiments of the children. Nothing so contributes to a real and vital (not merely sentimental) sympathy with living things other than ourselves as a careful study of their lives and habits. The child comes to see the world as they see it, and to appreciate and sympathize with them in their efforts to work out the purposes of their lives. And even if these purposes strike across human interests, the sympathy will not be entirely absent, and cruelty will grow more and more rare as sympathetic education progresses. The education of the sympathies finds little space in the formal school programme, and hence the special value of utilizing the opportunity here afforded.

There are several other topics which may be treated in like manner, as mensuration in its application to land measurements, etc., various phases of ecomomics as applied to rural affairs, the social and civic aspect of country life, etc.

We respectfully submit the foregoing suggestions, fully conscious of their limitations, in the hope that some little helpfulness may be found in them.

T. C. CHAMBERLIN,
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REPORT OF THE COMMITTEE OF TWELVE.

A COURSE OF STUDY FOR RURAL SCHOOLS.

[REPORT OF THE COMMITTEE OF TWELVE.]

A course of study for country school children should be framed with direct reference to the actual conditions that prevail in country life and, in large measure, determine it. Among the most important points to be kept in mind are the following:

1. *There is a general lack of appreciation of the immediate surroundings.*

This is not peculiar to country people; it is simply a fact in the country, as it is in the city. Education can confer no greater boon than that of showing how the real pleasures of life may be derived from one's own immediate surroundings, and from the work he is called upon to perform.

2. *There is an almost total lack of scientific skill in farm work.*

The prejudice against farm machinery has been extremely strong. Farmers have been forced into using it because other vocations have drawn away the help that formerly was depended upon for hand labor. The treatment of the soil is, in the extreme, unscientific. The American farmer, in this respect, is scarcely ahead of the Chinese; his unscientific methods have made him the target of every caricaturist. In this, and in a score of other ways, the farmer pays the penalty of his ignorance.

3. *In the country there is a great dearth of social life.*

This, more than hard work, deprives the country of its strength. Bad roads are largely responsible for the present social condition. In many places farmers, and especially the wives and daughters, live in dreary isolation for more than half the year, because no means of travel yet invented will master the mud of country roads. To properly recognize the foregoing conditions, therefore, it would seem that a course of study should contemplate three lines of interest:

1. *In the earlier years, especially, great attention should be given to the picturesqueness and natural beauty of the surroundings.*

Without trained and careful effort in this direction, the intensely practical character of their contact with the various things about them will close the eyes of the children to many beautiful things that should be a source of joy and pleasure throughout life. Much out door study should, therefore, be encouraged. The children should be familiar with every brook, and waterfall; every cliff, wooded copse, and ravine. The hills, cloud-capped, basking in sunshine, or glistening with snow, should be permitted to work their silent influences into the children's lives. The country pupils are not naturally insensible towards these scenes; but the usual tendency of school life is to belittle and destroy all kinship that the children may originally feel for the beautiful. As an adjunct in this phase of study, drawing, painting and modeling should hold at least equal place with reading, in these early years.

2. *To supply the demand for scientific skill, a good deal of attention should be given to —*

(1) *Mechanics.*—Pupils should be taught enough of practical mechanics to enable them to ward off the legion of fakirs that beset the farmer with their labor-saving (?) devices.

(2) *Manual Training.*—Scarcely a day in a farmer's life passes when there is not some demand made for skilled hand work with tools. The "stitch in time" on the farm is frequently fatally delayed when it involves a trip to a neighboring mechanic.

(3) *Mathematics.*—The farmer suffers more loss to-day from his ignorance in this subject than any other. Bookkeeping, as applied to farm accounts, should be carefully taught. Taking the amount of money at stake on the farm into account, no other business in the world tries to get along with so little bookkeeping. As a natural result, there is infinite waste in a hundred ways that are unnoticed. The time has come when the farmer must learn the lesson that the merchant already knows, that, if he is to gather a competence, or even earn a livelihood, it must be done by a careful saving of *small* margins of profits *upon all* the things with which he may work, instead of by large gains upon a few things. Few farmers, simply because no accounts are kept, realize that badly stacked hay and grain, poorly fed stock, and illy cultivated fields result in actual cash loss, just as surely as though the money were spent at the gaming table. The arithmetic of the farm account would be of incalculable value to the farm boy if he learned nothing else. The study of form and elementary geometry should be made very prominent. Every farm boy should be taught the elements of trigonometry and surveying. He should know how to "run a line," and how to lay off fields so that the same may be worked to the greatest advantage. He should be taught how to lay out roadways at proper grade, and how to make them. Nothing would hasten the era of good roads more than to show the farmer how much loss in actual cash may be charged to bad ones, through loss in harness, vehicles, horseshoes, horses, and time.

(4) *Biology.*—To show the splendid opportunity before every farmer of intelligence for study in this field, it is only necessary to cite the fact that it was by a close study of domesticated animals and plants that Darwin was able to probe the mysteries of life more profoundly than any before him. It is by no means necessary that the farm boy should study the sunshine only to find its value in pounds of beef; by the nature of the case he is, if intelligent, brought into closer touch with the great problems of life and energy than any other being. It would broaden, not diminish, the scope of his interest if from boyhood he would learn everything possible about the care and scientific feeding of animals; if he were to learn exactly, for example, how to feed for beefsteak, and how to feed for butter, with the greatest economy. The study of plants would furnish an interesting analogy. The selection of seed; the cultivation of crops with due reference to roots and top; planting, care and grafting of fruits; the relative value of forage, grain and other crops, and many similar topics, are subjects of exhaustless study, every hour devoted to which would bring actual cash returns, and at the same time furnish a broad basis for an understanding of the plant world.

(5) *Meteorology and Physics of the Atmosphere.*—By a careful study of the maps and other materials supplied by the United States Weather Bureau, every farm boy should learn something of the nature of the great storms that are likely to visit his region. A careful study of the weather maps, supplemented by good collateral reading, would leave very little to be desired in his geography.

(6) *Mineralogy.*—The composition, the origin and the treatment of soils, how their productiveness may be renewed and conserved. The relation of the soil to the underlying rock. The origin and relative value of the native rock. The geological history of the country.

(7) *Chemistry.*—A practical knowledge of the principal elements which enter into the soils, plants and animals. The chemistry of foods.

These subjects should be presented, not only from the economic, but also from the more strictly scientific or philosophic side. Because "Man shall not live by bread alone," he has always despised the science of bread for bread's sake. Country children, as well as all others, must be allowed to have an insight into the deeper and more general problems of creation, if they are to be satisfied with their work. An intelligent study of nature from the economic standpoint inevitably involves a study from the scientific side also.

It would be a service of inestimable value to the rural schools, and, for that matter, to schools everywhere, if the many government publications bearing upon the studies of nature could be placed in libraries easily accessible to teachers and pupils. The best of these should be in every schoolhouse as books of reference. These works are worth a great deal more than many of the text books that are far more pretentious.

3. If the country is ever to acquire that refinement which the human being feels it is his right to possess, it must grow it. There are those who believe that, sometime, the great tide of youth that is now pouring in upon our cities will turn back upon itself, and thus carry to the country the culture that the soil could not of itself produce. It is not to be. Those who are once engulfed in the vortex of the city never go back; and if their children or children's children are by some chance cast out upon the country, they must begin life afresh, as did the primeval man.

Certain physical conditions that now prevail in the country must be improved, or social progress will be forever stayed. The chief of these obstructive conditions is the unspeakable system of roadmaking. Good roads, with their natural *sequelæ*, would practically solve the problem of country life. They would mean hours of social intercourse instead of hours of dreary, monotonous solitude. They would mean free delivery of goods from the stores in towns. They would mean free and daily delivery of mail. Better have three or even four cent postage, if necessary, with free delivery every day, than one cent postage and the "catch as catch can" delivery of the present time. Good roads would mean the

rapid extension of the trolley car system, which would reduce to the minimum the labor of exchange of commodities between one locality and another, and between country and town. As in the city the attention of children is being directed more and more to municipal affairs, so in the country let the children study practically all these conditions, which lie at the foundation of their physical, intellectual and moral welfare.

Whatever else the course of study may do, let it breathe hope for the country boys and girls; not the hope of a life that, to be realized, must be lived in the city, but let it rouse the anticipations of a life that has its background in the sunsets, the hills, the woods, the orchards, and the waving grain fields of the country. A genuine life, intelligently lived, alone can bring culture. Whether the instrument of living is the plow or the pen, it matters but little; the furrow well turned, and the line well written, are both fundamentally and absolutely unterchangeable in human society.

Country life, not less than that in the city, may have its aspirations that are truly noble. The schools must not confuse or destroy these by trying to "citify" the country or by seeking to "countrify" the town.

The city and the country express the equation in life; a weakness in one member means the ruin of both. Each must supplement but not destroy the other, and both must be preserved.

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THE FARM AS THE CENTER OF INTEREST.

[REPORT OF THE COMMITTEE OF TWELVE.]

Nowhere on earth has a child such advantages for elementary education as upon a good farm, where he is trained to love work and to put his brains into work. The best taught school in a densely populated city can never equal in educative value the life upon a good farm intelligently managed.

The child on the farm is made responsible for something, for some work, for some care taking, and out of this responsibility grow trustworthiness, habits of work, and a feeling of personal power in all the essential elements of character, with the exception of those much needed phases that spring from personal contact with society outside of home.

The surroundings of the child upon the farm in contrast with the complexity of city surroundings are comparatively simple; the same forms, colors, sounds are repeated in endless succession, presenting innumerable variations and at the same time complete harmony and unity. The trees, the shrubs, the foliage, the flowers, the fields, the hills, valleys, plains and brooks create distinct, everlasting images in the child's mind; images, impressed, concentrated and expanded by countless sensa-

tions, by countless contrasts, that stream in through every avenue of the soul.

Then, too, everthing appeals to the child as useful or non-useful. Farm work means the necessities of life, the comforts of home, the possibilities of an education. The reaction of the child upon his environment is the main thing, however; his power to conquer nature with his own hands and mind, together with continual lessons which bring home to him the inevitable action of and his dependence upon the laws of nature, as they assist, or as they baffle, his efforts.

The child enters school with senses keen, character in full tide of formation, and the impulse to act fully organized. He has, besides, acquired a comprehensive knowledge of his environment. The instinctive, spontaneous growth should go on and have full opportunities for complete development.

The statement of what a farm does for a boy in its general lines may easily be taken from the experience of a farm boy in New England, for instance. It is possible for me to give the story of such a one from actual experience — what he learned, what he studied, and what he acquired.

The scene is upon a rocky farm in New Hampshire; the boy an ordinary child, such as you may meet anywhere in this world of ours. As soon as he found himself upon the farm, at eight years of age, he began to study — to study in the best sense of that much abused word. He began the study of geography, real geography. He observed with ever increasing interest the hills, valleys, springs, swamps and brooks upon the old farm. The topography of the land was clear and distinct; its divisions into fields, pastures and forests were to him the commonest facts of experience. The image of the whole farm and all that it contained is one of the clearest and most distinct memories in his mind today.

The boy not only studied geography, but the foundations of geography, geology and mineralogy. He knew in an elementary way the nature of the soils; why one field was better than another for a certain crop, and began to reason upon cause — sunshine, drainage, drought, and fertilization.

He studied botany. All the kinds of grasses he knew — timothy, clover, red top, silver grass, pigeon grass; how they were sown, how they came up, grew, were cut, cured, and fed to the cattle; what kind of hay was best for sheep, and what for oxen. He knew the different weeds, too — the rag weed, smart weed, pig weed; he had a practical knowledge of these from close contact, with the hoe and his bare hands. This knowledge of plants took in medicinal herbs — caraway, camomile, catnip, docks, worts and mints, lobelia, pennyroyal and garget. These practical lessons in herbs were doubly impressed, sometimes in a painful way, although they were intended to relieve pain.

The flowers that grew on the farm and surrounding farms, wild and cultivated, hollyhocks and lilacs in the garden, the golden rod and violets of the pasture, and the sweetest flower that ever blossoms, lifting its delicate petals close by the snow banks in the early spring, the harbinger of the resurrection — the trailing arbutus, taught him lessons of beauty, trained his eye for color, deepened his reverence for God.

He knew the trees — the maple with its sweet burden of spring, the hemlock, and the straight pine which he used to climb for crows' nests. He noted the difference in woods, and their value. As soon as he could wield an axe he cut the trees for lumber, fences and firewood. With all the shrubs he was acquainted; in fact, he got an elementary but very useful classification that has made the subject an interesting one throughout his life, and prepared him to appreciate the practical value of botany in the schools.

He studied zoology, too. The animal life of the farm was very close to him. The brutes were his early companions. The domesticated animals he knew — the frisking lambs, the knowing and antagonistic buck, the tricky mare. He helped to break steers, to kill hogs, to hunt for eggs, to feed the chickens. He knew the wild animals, the squirrels, the rabbits, the woodchucks; the insects, the grasshoppers, and ants; bugs that scurried away when he lifted a stone.

With the birds he was intimately acquainted — the wrens that built their nests in the barn and sheds, the robin redbreast, the shrieking bluejay, the tiny warblers in the woods, the wise crow and the timid partridge that would give her life in defense of her young.

He had a practical knowledge of meteorology. He could tell the time of noon upon the instant, by two infallible monitors, his stomach and his shadow. He could foretell storms with nearly as much wisdom as is exercised by the weather bureau. The coming of a shower was known to him — the hurry scurry to get the hay into the barn. The long, steady breezes from the east brought on the storm, and a storm was a welcome thing to a boy on a New England farm! It meant a day of perfect delight on the dear old river. The ostensible purpose of the boy was to catch a few small fish — the real purpose worship, alone by the rushing floods, the quiet pools, the pebbly beaches, and the silent woods.

In fact, every subject now known in the curriculum of the university this boy studied in an elementry way. He was really grounded in these studies. He observed, investigated and drew inferences, perfectly unconscious, to be sure, of what he was learning, or how he was learning; but still he learned and he studied, and the best lesson of all was his personal reaction upon his environment. His plowing, hoeing, haying, digging, chopping, lumbering, his mending of sleds, and making of cider, sugar, lye and soap were all so many practical lessons in life which exercised his body, stimulated his mind, and strengthened and developed his purpose in life.

He lived to become a school teacher, and taught school earnestly and bunglingly for twenty years before he had even a suspicion of the value of his farm life and farm work.

How the work of the children upon the farm is to be brought into the school, concentrated and expanded; how this great, spontaneous, ever increasing interest is to be made use of; how this organized energy is to be turned into the main life current, are questions of questions. It is the imperative duty of parents and teachers to determine how the farm life of the boy and the girl may be recognized by use in the school room. Which of all the studies the boy has begun should be discontinued? Are they not all essential? Must they be held in abeyance until he reaches the door of a high school or a college? That the child begins them spontaneously and instinctively is argument enough for their continuance.

Without attempting a course of study, I may be allowed to make some suggestions. In these suggestions I present only the common and common sense things needed in farm work and farm life, and endeavor to show why they form the substantial basis of all study.

GEOGRAPHY, GEOLOGY, MINERALOGY.

The child's knowledge of geography may be made the basis of all his further study of that subject. He brings into school geographical images of the farm and the surrounding landscape. He is tolerably well acquainted with the topography of his district and, it may be, of the town. First, find out how much the pupils really know of these subjects. Get them to describe the farm or any part of it. How many fields are there? Where are the pastures? The woods? What are you raising in each field? How many cattle have you? Describe them. Tell about the sheep, the horses, the hens. Get pupils to sketch the farm on the blackboard, paper, or slates.

A pile of sand in the yard might be used for modeling the farm, showing hills and valleys, plains and brook basins. In winter rough boards with raised edges might be used for sand modeling. Later, chalk, modeling should be used to indicate the relief of the land.

The beginning of political geography by the divisions of the farm into fields and pastures may be made. The lay of the land, the relative positions of these, form good lessons in the points of the compass. Pupils would compare one farm with another, so that in time they could model and draw the whole district, including the roads.

If there is a stream in the neighborhood, it may be used as a study of the brook basin, the wearing of water—a good introduction for geology. The examination of the soil after rains, especially loosened soil, may be studied to show the effect of storms in erosion. The dip and formation of the surface, division into hills or plains, bottom lands and bluffs, may be related to the working of the stream.

The study of mineralogy may begin with the study of soils, the kind of soils, and the forms of the grains. Specimens of gravel, sand, loam, vegetable mold, clay, and rock should be brought by pupils to school and studied. How is vegetable mold formed? What in the soil is useful for plant life? How does the soil change through vegetation and under cultivation, and also under the action of heat, water, frost? It is easily seen that all these are elementary studies in withering—dynamical geology.

If there are rocks on the farm, they may be studied; the archaic rocks, the secondary rocks, the strata, and the dip of the rocks—all so many points of introduction to geology. Boys on the farm will know something of the mineral on different parts of the farm, in different fields. In general the bottom land is the richest, and the question might easily be asked, Why? In this relation uses of the different kinds of soils may be studied. Questions of why one crop will grow in one portion of the farm, and not in another, and why crops should change or rotate from year to year, should all be brought in.

Housekeeping, butter and cheese-making, cooking, gardening, and affairs pertaining to home economy should be taken into the school. Draw and describe your garden. Divide it into beds. Locate the flowers, the vegetables. Sketch your hens, the turkeys. How do you make bread?

METEOROLOGY.

Elementary studies in distribution of heat would come through the changes of the seasons. The shadow stick may be used, showing the changes in the sun's position relative to the earth. A sun dial on the schoolhouse should be made. The daily changes in the sunlight coming through the different windows may be measured through shadows on the wall. It is a very easy matter to get the daily weather reports and examine them. Every country school should have a thermometer, barometer, anometer, and rain gauge, to measure the force of heat, the weight of air, the velocity of the wind, and the depth of the rainfall. Pupils should make weather reports day by day and compare them with the printed weather reports. The elementary study of air and its composition should be made; its weight, direction, and velocity. The study of evaporation of water, followed by the forms of water in the air—fog, mist, and cloud, should be made. Pupils may be called upon to make daily prophesies of the weather, and give their reasons for the same. Every change of the atmosphere, shower, rain, hail, snow, or wind may be taken advantage of for this purpose.

The uses of water may be discussed, especially the uses of water for vegetable life; the drainage of the land, especially on farms where the land has to be tiled; or where irrigation is necessary. Questions like these may be subjects of investigation: How far does the water go down into the earth? What stops it? The cause of a spring? A brook, creek,

rivulet, or river? The saturation of different kinds of soil and rock by water. Depth of the wells and changes in the water level. Into this discussion would come the question of floods and flood plains, and of silt brought down by the water, how and where deposited, that is to say, if there is a creek or a river on or near the farm.

These are some of the innumerable points in regard to meteorology that impinge on the child from all sides, and lead to higher and more difficult questions and investigations.

PLANT LIFE.

I should place first in this study the crops upon the farm; the study of the corn; its history; its nature; different kinds of corn; the uses of corn. The same may be said of wheat, oats, rye, and barley. How land should be fertilized for different crops. Study of the food of plants, nutrition, etc. The grasses may be studied; different kinds of grasses brought into the schoolroom.

In the spring germination of seeds may be especially noted. Seeds should be planted in boxes in the schoolroom. It would be an excellent plan to have a half-acre garden near the school, in which the experiments could be performed, and in which the farmers of the district would take a deep interest. The garden could be made of value, and should include everything that is raised on the farm. There should be a preliminary study of plants, especially flowers, in regard to function. Little or no attempt, at first, should be made to close analysis, or to classification. The guide in the elementary study of all subjects should be function.

Forests: different kinds of trees on the farm; leaves, and bark of the trees; deciduous and non-deciduous trees; the use of wood for heat, shelter, and household furniture.

ZOOLOGY.

The study of domestic animals and their functions; cows, and different kinds of cows; milk, and how milk is changed to butter and cheese. The history, for instance, of butter and cheese-making, from the old-fashioned churn to the creamery. Study of horses and sheep; use of wools; meat of different animals. Study of wild animals, birds. Get each pupil to make a list of all the birds he sees upon the farm during the year; when they come, how long they stay, when they depart. This would bring observations in regard to migration. Name the birds staying upon the farm all summer. Where do they build their nests? How do they raise their young? What do they eat? What birds are injurious to the farm? What birds are useful? The pupils could learn many a profitable lesson; would find that most of the old ideas about birds are totally wrong; that many, if not all, of the birds that have been counted mischievous are really helpful; that birds are needed on the farm to kill destructive insects; that the little damage which crows,

for instance, bring about is comparatively nothing to the good they do; that the birds are really "nature's militia" to destroy the enemies that menace the life of vegetable, plant, and tree.

Another study is that of destructive insects; the wood-borers, the cankerworms, the weevil; a very practical study. Then there are the bees, wasps, butterflies, and their uses in efflorescence. The wonders of honey-making. The earthworms and the effect they have upon the soil. The boy will be sure not to leave out the woodchuck, the fox, the coon, or the muskrat. He may even learn that the unpleasant little skunk has a use and a place in the world.

PHYSICS AND CHEMISTRY.

Wherever forces are seen, felt, or handled, an inquiry into the nature of such forces is the study of physics. Meteorology is one of the great departments of physics. Distribution of sunshine, the working and nature of heat, the force and wearing of water, measurements of air, of the wind, are all close to the child, who needs only good teaching to lead him to close and closer investigation.

Practical uses of force suggest many problems: force of running water; running mills; force of wind is turning windmills; the economical application of force in farm machinery from the apple-parer to the reaper; the mystery of the lever revealed by wedge and crowbar; the turning of the grindstone; and the use of the jackscrew in raising buildings.

Chemical changes are taking place in earth, air, and water, and are continually applied in the household affairs. The teacher has an excellent opportunity to call attention to the chemistry of cooking; to yeast; to milk in its transmutation to butter and cheese; the making of lye and soap; the oxidation of metals. The composition and nature of different soils are a fruitful study; the effect of sunlight upon foliage in the production of leaf green; the transpiration of water through vegetable tissues, bearing nutrition from cell to cell. The burning of wood and its change into ashes.

The children upon a farm are called upon to apply daily the laws of chemistry and physics. It is the province of the teacher to lead them to apply these laws more and more intelligently, to the end that a deep interest is aroused and they are made earnest and everlasting students of these subjects.

MATHEMATICS.

There can be no work properly done upon the farm without measuring. Most of this measuring is done by what is called "rule of thumb," or so-called practical judgment. The farmer estimates weight of cattle, hogs or sheep by sight. He can tell how much cord wood or timber a certain area of forest will produce. In fact, measuring in everything he does is absolutely essential. There is no better way for the teacher to

study the processes of measuring, or arithmetic, than to inquire into the everyday demands of farm work, and no better way to teach arithmetic than to bring the measuring necessary for farm work into the schoolroom. The elementary work, and the work that ought to be continued throughout the course, should be largely estimation with eye and hand, of length, of distance, area, volume, bulk, force, and weight; the estimates to be verified by actual measurements. That which a farmer is called upon at every turn to do should be begun with the children. And here the parent can supplement the teacher at every step.

When developing the mode of judgment, the pupil should be trained to use the chain in measuring areas, the yard-stick in measuring cord wood, forceps in lumber, dry measure for grain, scales for weights, liquid measure for milk, vinegar, or molasses.

The outcome of all raising of crops is commercial value. There should be a system of farm bookkeeping, in which writing and arithmetic play a prominent part. Children could be easily trained to keep books for their parents, and the work of the farm be made to present all the problems and conditions for a complete mastery of all essentials in arithmetic.

READING AND LITERATURE.

The suggestions already given are for the elementary study of subjects. Interest in all these subjects will lead directly to a great desire to know more of the observations and investigations of others. Here reading and the study of text-books have their great place. The first steps in reading may be short stories of the farm, of the crops, of the animal and plant life, written in simple sentences upon the blackboard. The reading lessons should be closely related, and from beginning to end bear directly upon the subjects the child studies.

Nor is there wanting a great and extensive literature on geography, geology, mineralogy and botany. Books like "The Soil," written by F. H. King, University of Wisconsin, and "The Great World's Farm," by Salina Gaye, would arouse an intense interest if the subjects here named were really used for the education of the child. Poetry may be brought in at every step — the poetry of the farm, the clouds, the air, the winds, the flowers, the fields. The pupil will find that the poet and the artist have embalmed in deathless prose or poetry the commonest things of earth, air, and water by which he is surrounded. Thin, vapid, sensational, injurious reading would have no place in his life if all reading were carefully selected in the direction of his aroused, sustained and educative interests.

The process of learning to read is a very simple one, if the free, spontaneous action of the mind is not obstructed by abnormal methods. When the proper stage of development, which manifests itself in an intense desire to gain knowledge through the printed page is reached,

the child will learn to read as easily as he has already learned to hear language. All reading should come close to the child, should enter into his personal experience; should be about something he feels the need of knowing — facts about his pets, about things he loves to do — words that re-image familiar scenes. This would make reading and the selection of good literature a habit for life.

WRITING, GRAMMAR, SPELLING.

Writing is one of the modes of thought expression. The fundamental necessity is *to have something to express*, some image to control and steady the hand, some earnest desire to communicate with others by means of writing. Skill in writing takes care of itself if the teacher writes rapidly and well. Technical skill is nine-tenths imitation. The main thing is the impulse which the teacher discerns, seizes upon, guides, and controls. The farm is rich with interesting subjects, rich for the novice of six, or the pupil of sixteen. Descriptions of animals, plants, forests, fields, pastures, hills, valleys, soils, the germination of seeds, the gardening, the shower, the clouds, the rainstorm, hailstorm, snowstorm, the cyclone, the raising of crops, the cutting and curing of hay, the harvest, the market -- these are among the innumerable subjects that may be made of intense interest to the children of the country. The little ones may write a word, a line, or a paragraph; the older ones, pages.

And in such work comes the one sensible method of teaching spelling and grammar. Writing is spelling and punctuation, just as speech is fundamentally pronunciation. Using correct language is grammar, and where can pupils use correct language to better advantage than by writing under the direct impulse of thought?

MANUAL TRAINING, ART.

One central and invaluable thing gained on the farm is the necessity for and habit of work. All work on the farm should be honored in the schoolroom by expanding and concentrating it. The school should send back the children to the farm filled with the dignity of labor.

The work of the farm, in a broad sense, is manual training, but most farm boys get a coarse way of doing manual training. They do not learn to use their hands expertly as they should. On all farms there should be workshops for the mending of tools, construction of materials and apparatus for farm work, and in the country school there should also be a small manual training department in which pupils may be trained to use their hands skillfully in making things needed for the farm and the home.

No argument is here made for manual training; I would, however, enter an earnest plea for its adoption in the school on the score that it would make labor both honorable and interesting, and that its value as

a potent factor in the development of the brain would be recognized and appreciated by both parents and teachers.

Apparatus for experiment could be made with a small outfit, a bench, a few tools, lumber, and metals. Much of the lumber could be brought by the pupils from the farm. They could cut the wood. If it needed sawing it could be sawed at the mill. Wood manual training is one of the best ways to learn the uses of woods. There should be a small forge, and some work in iron and other metals as well. Every boy and girl should have a work bench at home and wood-carving materials, to develop the instinctive habit of whittling into something useful and ornamental. Long winter evening could be profitably utilized in manual training and the exercise of the arts.

The objects of art are countless, the modeling, painting, and drawing of land surfaces in geography, and illustrations in geology and mineralogy. Landscape and plant life furnish a great number of subjects for painting. Children have a perfect passion for drawing, until it is crushed by over-attempts at accuracy, or by the drawing of flat copies. With a good blackboard, which is the best piece of educational apparatus ever invented for school or home, children could show the different kinds of crops; draw cornstalks, grasses, flowers, and trees. Of course, these drawings would be crude, but at the same time they would be satisfactory to the child, and justly, for they would correspond with his images; the drawing in turn, would stimulate observation, and the result would be clearer insight. Exact drawing could be introduced in measuring, or arithmetic, and in making projection drawings or manual training. Experience has shown that children take great delight in such work, and that is in the highest degree educative.

Art study leads to the cultivation of taste, and many farmhouses, many cold and desolate sitting-rooms could be made beautiful by the art of the children; and their comfort enhanced by the manual training. Every effort should be made to project the work of the school into the life of the child. Invention may be stimulated by asking pupils to plan a hen house, wood shed, barn, farmhouse, and the selection of trees and shrubs to beautify yard, garden, and landscape.

INDUSTRIES AND COMMERCE.

The study of the commercial side of farm products should have its place in the school. The cost, the selection, the use of crops, and their value in selling. Here arithmetic and bookkeeping would come in. Transportation of crops would have its place, the team, the railroads. Where farm products are consumed. The subject of farm tools, instruments of work, may be studied. How crops are prepared for the market; the question of mills; the preservation of foods; barns; winter protection of cattle; ensilage. Transportation, beasts of burden, wagons; railroads, steamboats, in our own and foreign countries. The beginning

of history, how others live and have lived, is involved in this idea of commerce.

The geographical distribution of soil may be considered, as well as the distribution of the air, moisture, heat, and plant life, and through the careful and thoughtful study of the farm, the whole earth, in time, may be brought to the child.

HISTORY.

The elements of history are everywhere present on the farm. The history of farming tools, from the sickle to the reaper; from the crude plow of the poet to the steam plow of to-day; from the hoe to the cultivator. The history of butter making, from the old fashioned churn to the model creamery. The story of the mill; the history of the potato; of maize; of the tomato. How beets are now competing with sugar cane. If there is an experimental station in the neighborhood, it should be used as an auxiliary to the school, where the history and present status of agriculture may be studied.

Most towns in the eastern states, and some in the west, have interesting local histories. There are generally stories of the Indians, of settlements, of colonization, of noted men and women, of the part taken by the citizens in the Civil War. A strong love for history can be induced and fostered by beginning this study close to the home.

The breakfast and dinner table furnishes excellent starting points in the study of history. How much does the farm in itself furnish of the food of the family? What is obtained outside, and where is it obtained? History of the making of cloth, the story of the spinning wheel and the spinning jenny; the hand loom and the power loom. The study of the inventions used on the farm will lead directly to the biographies of their inventors and the relation of machiney to human progress. The history of roads and road making, back to the time of the Romans. There should be lessons in every school upon the nesessity and practicability of good roads, and the best methods and material for making them.

CONCLUSION.

The tremendous advantage of a rational course of work in country schools is that it would make a strong, binding union of the home and the school, the farm methods and the school methods. It would bring the farm into the school, and project the school into the farm. It would give parent and teacher one motive, in the carrying out of which both could heartily join. The parent would appreciate and judge fairly the work of the school, the teacher would honor, dignify, and elevate the work of the farm. Farmer and housewife would be ready to discuss the methods of the farm and housekeeping in the school. Children, parents, and teachers could meet at stated periods and hold discussions in

the direction of their highest interests. One of the best meetings I ever attended was a union of grangers and teachers in Oceana county, Mich. One hour was devoted to a discussion of how to raise potatoes, and the next was given to the education of children.

The farmers would become deeply interested in having libraries in the schools, carefully selected. Long winter evenings could be spent around the fireside in mutual study; parents helping children, and the children, in turn, arousing and stimulating parents.

Country life too often fails in the proper social conditions. It tends to isolation. A common purpose of education would obviate this. The farmer would often invite the school to visit his farm, and to study it. Pleasant and profitable social meetings would be the order of the day. The teacher with clear ideas of what education ought to be would bring the people of a district together to discuss the welfare of their children. Exhibits of pupils' work, of manual training and the arts would naturally follow and greatly increase the interest.

It is an indisputable fact that cities draw largely upon the country for men of action and affairs. There are, no doubt, some notable exceptions to this rule, but in the main, the leaders, both men and women, successful manufacturers, bankers, doctors, lawyers, ministers, statesmen, have received their early education upon the farm or in the workshop.

Education deserves to be regarded in a broader and more rational light. Real education should be read in terms of character — character translated into action. Sound judgment, common sense, wisdom acquired by observation and tempered by experience, with genius to help one's self, and power to plan and execute, entitle a man to a diploma from the world at large, if not from a university. Education which is worthy the name generates the power that penetrates life and makes it better.

No method, no system of schools, no enrichment of courses of study, not even the most successful of teachers, can ever take the place in fundamental education of the farm and the workshop. No matter how good the city schools may be, or may be made; no matter how good the state of society may be, the vital reinforcements of city life that lead to progress and prosperity, so far as we can see, must always come from the sturdy stock of the farm. This fact, upon which most educators agree, puts upon the country school an immense responsibility. It is no small office to train the men and women who are to lead and guide the future of the republic.

The country schools have every advantage, so far as material means are concerned; their environment is rich in organic and inorganic forms; but in one thing they are lacking — the teacher who can utilize that which offers itself in such abundance. This is a want which every thoughtful person deplores, a want that will be met when the farmers themselves realize what a powerful influence for good their schools may be made.

When skill, expertness, and insight control the methods of country schools; when excellent teachers remain in the same schools year after year, the already powerful influence of country life upon the destinies of the nation will be mightly enhanced.

A large majority of boys and girls upon the farm entertain mistaken notions of life in cities, and early form a desire to enter into the seemingly greater advantages to be found in such centers. This leads to the congestion of cities, and disturbs the social balance. School education alone can cope with this disease of the body politic, and this by fostering an interest in farm life and farm work.

Boys must be led to see something more in farm life than patient, continuous work of planting, sowing, care-taking, and reaping. Many a young man leaves the farm to become a mere counter-jumper in the city, who, if he had the right education, would make himself an influential and successful farmer.

My plea, then, is that the country school should make farm labor and all labor honorable; should dignify it; should show that the environment of the country furnishes inexhaustible resources for intellectual life; should see to it that the æsthetic side of child nature be assiduously cultivated; that the child bring a loving heart to nature, have an appreciative eye for beautiful things; that he be led to see the possibilities in the landscape of the farm—the necessity of making excellent roads, well lined with shade trees; that the so-called practical things of life, hard and severe labor, should have their highest outcome in the cultivation of the love of the beautiful in life—that love which leads the soul to profound reverence for all things of earth, because they are loving gifts of an infinite God.

FRANCIS W. PARKER.

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LIST OF BOOKS FOR RURAL SCHOOLS AND COMMUNITIES.

[REPORT OF THE COMMITTEE OF TWELVE.]

The committee has endeavored to make out a list of books for study and reading for parents, teachers and pupils in the country schools. It wishes to acknowledge the assistance of President F. W. Parker, of Professor L. H. Bailey, of Cornell University; Professor F. H. King, University of Wisconsin, and Professor D. L. Kiehle, of Minnesota,

Colonel Parker makes this suggestion: "The mere reading or study of these books, without copious illustrations direct from nature, would be like reading any other books without experience back of them. My suggestion is this: that the books be read in connection with the study of nature. The teachers can easily make the right selections; for instance, the study of soils in the time of plowing, the study of plants in the time of growth, etc. Specimens may be brought into the schoolroom, or better, the pupils may go to the specimens by field excursions.

"I am quite sure there are many other books, but I have not had sufficient time to get hold of them.

"I wish to call the attention of the teachers to a fact that should be well known, that the United States government publishes some of the best books on farming and nature known. I have appended a very brief list here, but the trustees of schools and principals of schools can very easily get all these valuable documents from their representative in Congress."

AGRICULTURE.

The Soil, Franklin H. King (Rural Science Ser.). The Macmillan Co. Reading and study for school and home; excellent for study of upper grades and farmers' meetings.

The Fertility of the Land, J. P. Roberts. The Macmillan Co. Reading and study for home and school. Excellent.

First Principles of Agriculture. Edward B. Voorhees. Silver, Burdett & Co. Reference.

Irrigation Farming, Lute Wilcox. Orange Judd Co. Reference.

Farm Drainage, C. G. Elliot. United States Department of Agriculture (Farmers' Bulletin No. 40). Reference.

Tillage and Implements, W. J. Malden. G. Bell & Sons. Reference.

Our Farming, T. B. Terry. The Farmer Co., Philadelphia. Reference.

Yearbook of the United States Department of Agriculture. Reference.

Farmers' Bulletins, United States Department of Agriculture. Reference.

Relation of Soil to Climate, E. W. Hilgard. Bulletin No. 3, United States Weather Bureau Department.

Some Physical Properties of Soil in their Relation to Moisture and Crop Distribution, Milton W. Whitney. Bulletin No. 4, United States Weather Bureau Department.

Fluctuations of Ground Water, Franklin H. King. Bulletin No. 5, United States Weather Bureau Department.

Laws of Rainfall, Gustavus Hinrichs. United States Department of Agriculture.

Forest Influence upon Climate, Water Supply and Health, B. E. Fernow. Bulletin No. 7, Division of Forestry.

HORTICULTURE.

The Principles of Fruit Growing, L. H. Bailey. The Macmillan Co. Reading and study for home and school.

American Fruit Culturist, J. J. Thomas. Orange Judd Co. Reference.

Landscape Gardening, Edward Kemp. Orange Judd Co. Reference.

How to Make the Garden Pay, T. Greiner. Orange Judd Co. Reference.

Principles of Plant Culture, E. S. Goff, Madison, Wisconsin. Reference.

Plant Breeding, L. H. Bailey. The Macmillan Co. Reference.

Nursery Book, L. H. Bailey (Garden Craft Ser.). The Macmillan Co. Reference.

Horticulturist's Rule Book, L. H. Bailey. The Macmillan Co. Reference.

BOTANY.

How Crops Grow, S. W. Johnson. Orange Judd Co. Reference.

How Crops Feed, S. W. Johnson. Orange Judd Co. Reference.

Familiar Trees and their Leaves, F. S. Mathews. D. Appleton & Co.

Familiar Flowers of Field and Garden, F. S. Mathews. D. Appleton & Co. Excellent for reference. May be profitably studied with the flowers and plants throughout the year.

The Garden's Story, G. H. Ellwanger. D. Appleton & Co. Reference.

How Plants Grow, Gray. American Book Co. Reference.

Botany for Public Schools, Abbie G. Hall. Geo. Sherwood & Co. Reference.

Botany for Young People, Gray. American Book Co. To be read with specimens by intermediate grades.

From Seed to Leaf, J. H. Newell. Ginn & Co. Reader.

Talks Afield, L. H. Bailey. Houghton, Mifflin & Co. For teachers. Good for field excursions.

Chapters on Plant Life, S. B. Herrick. Harper & Bros. To be studied with specimens and microscope by intermediate grades.

How to Know the Wild Flowers, Mrs. Wm. S. Dana. Chas. Scribner's Sons.

Plants and their Children, Mrs. Wm. S. Dana. American Book Co.

SCIENCE.

Sunshine, Amy Johnson. The Macmillan Co. Reading book for grammar grades.

Forms of Water, Tyndall. D. Appleton & Co. Eighth grade.

Weather, Ralph Abercromby. D. Appleton & Co.

Natural History of Selborne, Gilbert White. Ginn & Co. Eighth grade.

The Great World's Farm, Selina Gaye. The Macmillan Co. Charming and very profitable grammar grades and home study.

Elementary Meteorology, W. M. Davis. Ginn & Co. Teachers and parents, and for reference.

A Popular Treatise on the Winds, W. Ferrel. John Wiley & Sons. Teachers' study and reference.

Elementary Text-Book of Physical Geograghy, R. S. Tarr. The Macmillan Co. Excellent for study and reference.

The Geological Story Briefly Told, J. D. Dana. American Book Co. Excellent for reading and reference.

First Book in Geology, N. S. Shaler. D. C. Heath & Co. Unexcelled reading book for seventh and eighth grades.

The Story of the Hills, H. N. Hutchinson. The Macmillan Co. Reading book for eighth grade.

Monographs on Physical Geography. American Book Co. Excellent for teachers' study.

Round the Year, L. C. Miall. The Macmillan Co. Teachers.

Autumn, Winter, Spring. Three small volumes. Ginn & Co Reading for third and fourth grades.

Science Readers, Vincent T. Murche. The Macmillan Co.

Systematic Science Teaching, E. G. Howe. D. Appleton & Co.

ANIMAL LIFE.

Honey Bee, L. L. Langstroth. J. B. Lippincott Co. A practical treatise. Reference.

Manual for the study of Insects, J. H. Comstock. Comstock Publishing Co., Ithaca, N. Y. Reference.

Half Hours with Insects, A. S. Packard. Estes & Lauriatt. Reference.

Buz; or the Life and Adventures of a Honey Bee, Maurice Noel. Henry Holt & Co. Reading, eighth grade.

Boys and Girls in Biology, S. H. Stevenson. D. Appleton & Co.

Ants, Bees, and Wasps, Lubbock. D. Appleton & Co. Reference.

The Population of an Old Pear Tree, E. van Bruyssel. The Macmillan Co. Grammar grades.

My Saturday Bird Class, Olive Thorne Miller. D. C. Heath & Co. Fourth grade.

Little Brothers of the Air, Olive Thorne Miller. Houghton, Mifflin & Co.

In Bird Land, L. S. Keyser. A. C. McClurg & Co.

Tenants of an old Farm, H. C. McCook. Fords, Howard & Hulbert. Habits of insects.

Domesticated Animals, N. S. Shaler. A. C. McClurg & Co.

Life Histories of American Insects, Clarence M. Weed. The Macmillan Co. Entertaining and instructive.

NATURE STUDY.

Nature Study and Related Subjects, Wilbur S. Jackman, Chicago Normal School.

Tommy-Anne and the Three Hearts, Mabel Osgood Wright. The Macmillan Co. A good reading book for intermediate grades.

The Beauties of Nature, Lubbock. The Macmillan Co. Home reading.

Man and Nature, G. P. Marsh. Chas. Scribner's Sons. Reference and reading.

Forest Trees, Wild Apples, and sounds, H. D. Thoreau. Houghton, Mifflin & Co.

John Burroughs' Works. Houghton, Mifflin & Co.

Winter Sunshine. Parents and teachers. For pupils, The Apple.

Riverby. Parents and teachers. Selections for home reading.

Wake-robin. Parents and teachers. Selections for older pupils.

Pepacton. Parents and teachers. Selections for pupils; Springs, Idyl of the Honey-Bee, etc.

Locusts and Wild Honey. Home reading. Selections for pupils; Sharp Eyes, Strawberries, Is it Going to Rain, Bed of Boughs, etc.

Signs and seasons. Home reading. Selections for pupils: The Tragedies of the Nests, A River View, Bird Enemies, Phases of Farm Life.

Birds and Poets. Home reading.

Bass's Nature Stories for Young Readers. D. C. Heath & Co. Excellent for third and fourth grades.

MISCELLANEOUS.

Art of Beautifying Suburban Home Grounds, F. J. Scott. D. Appleton & Co.

A Text-Book on Roads and Pavements, F. P. Spalding. John Wiley & Sons.

United States Government Reports.

Water and Land, Jacob Abbott. Harper & Bros.

What Darwin saw in his voyage round world in Ship "Beagle." Harper & Bros.

Brooks and Brook Basins, Alexander Frye. Ginn & Co.

The Story of a Stone, in Science Sketches, David Starr Jordan. A. C. McClurg & Co.

The Earth and its Story, Angelo Heilprin. Silver, Burdett & Co.

Formation of Vegetable Mold, Darwin. D. Appleton & Co.

Science Primer of Physical Geography, A. Geikie. American Book Co.

Up and Down Brooks, Mary E. Bamford. Houghton, Mifflin & Co.

Every-Day Occupations, H. W. Clifford. Boston School Supply Co.

Modern Industries and Commerce, Robert Lewis. Boston School Supply Co.

Camps in Rockies, William Grohman. Chas. Scribner's Sons.

Coal and Coal Mines, H. K. Greene. Houghton, Mifflin & Co.

Canoemates, Kirk Munroe. Harper & Bros.

The Sea and its Wonders, Mary and Elizabeth Kirby. T. Nelson & Sons.

Campmates, Kirk Munroe. Harper & Bros.

Talking Leaves, W. O. Stoddard. Harper & Bros.

An Iceland Fisherman, Pierre Loti. A. C. McClurg & Co.

Hunter Cats of Connorloa, H. H. Roberts Bros.

John Brent, Theo. Winthrop. Henry Holt & Co.

The Electrical Boy, J. T. Trowbridge. Roberts Bros.

How to Study Geography, F. W. Parker. D. Appleton & Co.

Methods and Aids in Geography, C. F. King. Lee & Shephard.

The Story of the Plants, Grant Allen. D. Appleton & Co.

Wonders of Plant Life, S. B. Herrick. G. P. Putnam's Sons.

Intelligence of Animals, Ernest Menault. Chas. Scribner's Sons.

Elementary Meteorology, F. Waldo. American Book Co.

The Food of Plants, A. P. Laurie. The Macmillan Co.

Agriculture, R. H. Wallace. J. B. Lippincott Co.

Garden Craft Series. The Macmillan Co.

Rural Science Series. The Macmillan Co.

The Story of our Continent, N. S. Shaler. Ginn & Co.

Glimpses at the Plant World, F. D. Bergen. Ginn & Co.

Animal Memoirs, Parts I.–II., S. Lockwood. American Book Co.

The Survival of the Unlike, L. H. Bailey (Garden Craft Ser.). The Macmillan Co.

Elements of Geology, LeCompte. D. Appleton & Co.

Town Geology, C. Kingsley. The Macmillan Co.

RULES AND REGULATIONS BY THE STATE BOARD OF EDUCATION.

Authorized by the Code of Public Instruction, section 27: "The said board shall have power—*Second*, to prepare a course or courses of study for the primary, grammar and high school departments of the common schools, and to prescribe such rules for the general government of the common schools as shall secure regularity of attendance, prevent truancy, secure efficiency and promote the true interests of the common schools."

TEACHERS.

1. The teachers in the public schools of this state shall follow the prescribed course of study and enforce the rules and regulations of the board of education; shall keep records, use blanks and render reports according to instructions.

2. Teachers shall be held responsible for the care of all school property entrusted to them; shall frequently inspect the same and promptly report to the district clerk any damage it may have received.

3. Teachers shall prepare a program of daily exercises, a copy of which shall be posted in a conspicuous place in the school room.

4. Teachers shall exercise watchful care over the conduct and habits of the pupils while under their jurisdiction.

5. Teachers shall maintain strict order and discipline in their schools at all times. Any neglect of this requirement will be considered good cause for dismissal. Corporal punishment may be resorted to when it becomes necessary to the preservation of proper discipline. No cruel punishment shall be inflicted; and no teacher shall administer punishment on or about the head of any pupil.

6. In any case of misconduct or insubordination, when the teacher deems it necessary for the good of the school, he may suspend a pupil, and shall immediately notify the directors of the district thereof for further action.

7. Every public school teacher shall give vigilant attention to the temperature and ventilation of the schoolroom and shall see that the doors and windows are open at each intermission, for the purpose of changing the atmosphere of the room.

8. Teachers shall have the right, and it shall be their duty, to direct and control within reasonable limits the studies of their pupils: *Provided*, That all pupils shall receive instruction in the branches included in the prescribed course of study.

9. The use of tobacco in any form or place by a teacher is discountenanced, and the use of alcoholic stimulants in any form or place as

a beverage is prohibited. The use of tobacco or any other narcotic on the school premises by a teacher shall work a forfeiture of his certificate.

10. At the close of every term of school the teacher shall thoroughly examine his pupils in the studies of the term, using written questions and requiring written answers whenever practicable, and the standing of each pupil in the examination shall be noted accurately upon the school register. A report of the examination and standing of the pupils shall be forwarded to the county superintendent.

11. Teachers shall require excuses from the parents or guardians of pupils, either in person or by written note, in all cases of absence, tardiness or dismissal before the close of school, and no excuse shall be deemed valid except that of sickness or necessary employment. The teacher shall be the judge of the sufficiency of excuses, subject to an appeal to the directors.

12. Whenever the unexcused absences of any pupil during any term shall amount in the aggregate to five days, he shall be reported to the directors, and the teacher shall suspend him until the opinion of the directors shall be given. For this purpose an unexcused tardiness or unexcused absence for half a day or less shall be deemed a half a day's absence, and any unexcused absence for more than half a day at one time shall be reckoned as an absence for a whole day.

13. In all public schools in this state the teachers shall require of their pupils regular exercises in composition and declamation. In the preparation of programs for rhetoricals, teachers shall use every effort to secure selections of a high literary character and to make the work truly educational.

PUPILS.

1. Every pupil shall be punctual and regular in attendance, obedient to all rules of the school, diligent in study, respectful and obedient to teachers and kind and obliging to schoolmates.

2. Willful disobedience, habitual truancy, vulgarity or profanity, the use of tobacco on or about the school premises, stealing, the carrying of deadly weapons, the carrying or using of dangerous playthings, shall constitute good cause for suspension or expulsion from school.

3. As soon as dismissed, pupils shall leave the school premises and go directly to their homes. Loitering on the way to and from school is positively forbidden.

4. Pupils shall give attention to personal neatness and cleanliness, and any who repeatedly fails in this respect may be sent home to be prepared properly for school.

5. Pupils shall not be detained more than forty minutes after the regular hour for dismissal.

EIGHTH GRADE GRADUATION.

1. The state superintendent's office will send to the county superintendent's at intervals during the year lists of questions to be used in the examination of pupils who have finished the eight years' course of study below the high school.

2. The county superintendent, a teacher appointed by him, or one or more patrons of the district, should have charge of the room during the examination.

3. The papers should be graded by a teacher or committee appointed by the county superintendent, and sent to the office of the superintendent for inspection. The superintendent shall make other arrangements when conditions do not permit of the above methods.

4. The standard, on the basis of 100 credits, is as follows:

Minimum in any subject, 60 credits.
Minimum in grammar and arithmetic, 80 credits.
Average of all subjects, 80 credits.

5. A pupil who successfully passes the examination will receive a certificate of graduation which will entitle him to enter any high school of the state.

6. Writing will be graded on the manuscript submitted.

7. No pupil will receive a certificate who has not read two or more books selected or approved by the county superintendent.

EXAMINATION OF TEACHER.

1. Candidates must write in ink, placing but one subject on the same paper.

2. The county superintendent shall have the exclusive handling of the questions until examination day. The questions must not be opened by him until the examination day, and then in the presence of the applicants.

3. Superintendents shall report to this department any applicant who gives or receives assistance in the examination.

4. Applicants who are absent at the opening of the examination must not be admitted except for the remaining subjects of the program.

5. Superintendents shall distribute questions on a given subject to all applicants at the same time, and no recess shall be allowed until the subject is completed.

6. In orthography, only proper names are to begin with capitals. The International, the Standard, or the Century Dictionary shall be authority.

7. When right principles are employed in arithmetic, an incorrect answer shall diminish the credits not more than one-fifth.

8. Complete written analysis must be given in mental arithmetic to obtain full credit.

9. Allowance will be made in grammar for different authorities.

10. Answers in theory and practice of teaching shall receive credit if they show intelligence, though they do not conform to the theories of tue superintendent of public instruction.

11. No questions prescribed by the state board of education shall be set aside by the county superintendent.

12. Any applicant feeling aggrieved at the decision of the superintendent of public instruction may within thirty days appeal from said decision to the state board of education. Said board shall review the papers of said applicant, and the superintendent shall issue a certificate in accordance with the instruction of said board.

13. Penmanship will be graded from the general question papers.

SCALE OF MARKING.

14. (*a*) Orthography, Arithmetic (Mental and Written), Grammar, United States History and Constitution, Theory and Practice, State School Law and Constitution, Physiology, Geography, Reading, Writing, Algebra, Physics and Literature, each 100 credits. Total credits, 1300.

(*b*) For First Grade Certificates, applicants must receive 1170 credits according to the above scale, and must not fall below 90 per cent. in either arithmetic or grammar, nor below 70 per cent. in any other branch, and must have taught at least one school year of nine months.

(*c*) For Second Grade Certificates, applicants must receive 800 credits, and must not fall below 80 per cent. in either arithmetic or grammar, nor below 60 per cent. in any other branch.

(*d*) Applicants for Third Grade Certificates must receive 700 credits, and must not fall below 70 per cent. in arithmetic or grammar, nor below 50 per cent. in any other branch.

PROGRAM OF EXAMINATION.

15. (*a.*) THURSDAY.—*Morning session:* Begin at 9 o'clock; Arithmetic, Orthography. *Afternoon session:* Begin at 1:30 o'clock; Physiology, Theory and Practice of Teaching.

(*b.*) FRIDAY.—*Morning session:* Begin at 9 o'clock; Grammar, United States History and Constitution. *Afternoon session:* Begin at 1:30 o'clock; Geography, State School Law and Constitution, Reading.

(*c.*) SATURDAY.—*Morning session:* Begin at 9 o'clock; Algebra, Physics. *Afternoon session:* Begin at 1:30 o'clock; Literature.

(*d.*) General questions may be answered at any time of the first day, to be fixed by the county superintendent.

16. An applicant who receives a second grade certificate may complete the examination in the remaining subjects required for a first grade certificate at any examination within two years, and, if the required credits are obtained, a first grade certificate will be issued bearing the date of the last examination. A holder of a third grade

certificate may take successive examinations, and if he receive the required credits before the certificate expires, a second grade certificate will be granted.

NOTE.—The superintendent of public instruction will permit an applicant to raise the grade of his certificate while in force by taking the highest standing from two or more successive examinations.

17. An applicant will be credited with the standing earned in reading circle work, on subjects which are by law required for a certificate, in accordance with other regulations prescribed by the state board of education.

18. Two credits may be added for each ten months' successful experience to a maximum of twenty credits. The total of twenty credits may be divided among several subjects, as the conditions require, but not more than ten credits may be applied to one subject.

RENEWAL OF CERTIFICATES.

SEC. 144 (Code of Public Instruction). The holder of a first grade certificate who shall present to the superintendent of public instruction evidence of having taught successfully twenty-four months during the time the said certificate has been in force may have his certificate renewed without further examination, which renewal shall be indorsed thereon by the superintendent of public instruction upon its presentation for a like term of five years: *Provided*, That such renewed certificate shall lapse upon failure of the holder to teach for a period of two consecutive school years: *Provided further*, That a teacher holding a second grade certificate who has taught in a primary grade of the public schools of the state for not less than four years immediately preceding the expiration of said certificate, and who has taken at least one subject of the Teachers Reading Circle each year, under the regulations prescribed by the state board of education, may have said certificate renewed for two years as a primary teacher only.

NOTE.—(*a.*) First grade certificates will be renewed if the holder passes the required examination in at least one Teachers' Reading Circle subject each year.

(*b.*) For first grade primary certificates, drawing and music are substituted in lieu of algebra, and nature study in lieu of physics. (See section 141, '99 amendment Code Public Instruction).

(*c.*) The term "primary" is construed to embrace the first four years of school work.

STATE CERTIFICATES AND DIPLOMAS.

1. In all applications for state certificates or for life diplomas an affidavit of the applicant, or of some other person known to the board of education, must be filed with the board, which application must state

the entire time the applicant has taught, and the number of months taught in the State of Washington.

2. An applicant basing his application upon a *State or Territorial Certificate or Diploma* of another state or territory must file with the board an affidavit enumerating the subjects in which he was examined in obtaining the certificate or diploma upon which his application is based, unless those subjects are enumerated in said certificate or diploma; and, when possible, the percentage obtained in the several subjects must be given.

3. An applicant basing his application upon a diploma from any *State Normal School*, or who is a graduate from a regular four years course of the University of Washington, the Agricultural College and School of Science, or of any other reputable institution of learning, whose requirements for graduation are equal to those of the University of Washington, and which is legally authorized to grant diplomas, shall file with the board an affidavit specifying the subjects embraced in the course of study pursued by said applicant in said school, with a statement of the length of time occupied in the completion of said course of study, together with the standings as above: *Provided*, That all applicants for state certificates of any kind must file satisfactory evidence of having taught successfully twenty-seven months, at least nine of which must have been in the public schools of this state.

4. Applicants basing their application upon a diploma from a private institution will be required to pass an examination in theory, psychology and history of education.

5. Persons holding Washington territorial certificates or diplomas may be granted state certificates or life diplomas upon filing evidence with the state board of having taught the time required by law for said certificate or diploma, and upon the payment of the requisite fee, and upon passing examination in the additional subjects required by law.

6. Applicants for state certificates or life diplomas failing to complete the list of subjects at any regular designated examination conducted by the board may finish said list of subjects at any subsequent examination held within a year.

7. Applicants for state certificates and life diplomas basing their application upon results of an examination shall be required to attain an average of 90 per cent. in the subjects required by law; but no applicant shall be entitled to receive such certificate or diploma who shall fall below 90 per cent. in either arithmetic or grammar, or 70 per cent. in any other subject.

8. Applicants who have received a first grade certificate issued by the Superintendent of Public Instrnction will be credited with their standing in those subjects upon application for a state certificate.

9. An applicant who completes a subject in reading circle work will be credited with the standing in that subject in accordance with other regulations prescribed by the board.

10. Any person holding a valid state certificate in this state may be granted a life diploma upon filing satisfactory evidence of having taught the required ninety months, and upon paying the lawful fee.

11. The words "state normal school," as used in section 138 of the Code of Public Instruction, are construed to mean a normal school sustained at the public expense of a commonwealth or body politic, as a part of the public school system.

12. The time and place for holding examinations shall be such as are designated from time to time by the State Board of Education.

SPECIAL SUGGESTIONS TO TEACHERS.

In adjusting the grade work from the conditions found at the opening of the schools in September, 1900, to the conditions contemplated by this manual, the following must be kept in mind:

1. The text book work in physiology and geography has been reduced, to make way for regular oral instruction in nature and science in the primary grades. You cannot do acceptable work without a library. Study the library lists, and have the district buy the books most used in the outlines given in the manual. Lead your pupils to make use of both the *printed page* and the *book of nature.*

2. The geography text is used in the fifth and sixth grades. To prepare for eighth grade examinations, the text should be reviewed in the eighth year.

3. There is no adopted science book for the eighth grade, and each teacher should recommend to the eighth grade class some one of the science books suggested on page 26 of the manual. Farming communities will be interested in James' "Practical Agriculture." More discipline will result from the study of a special science than from the study of geography alone. See the quotation from G. Stanley Hall, page 24.

4. In the language course, give much practice in writing upon original matter. Reserve the severest text book study for the higher book, beginning in the sixth grade and completing in the eighth.

5. Begin at once to use the books in history and civics. The first text used is the primary history in the fifth grade. So many pupils never go beyond that point, and none should miss the knowledge of their country to be learned from that book. Do not omit to emphasize the civics text in the sixth grade. It treats almost entirely with local government, the first with which the pupil comes into touch. From the fact that so many leave school before this grade, this book should come earlier, if the program will permit.

6. The arithmetic work should be adjusted to the course as soon as possible; but it will not be possible for some eighth

grade classes to bring up the algebra and geometry required to complete the grammar grade book the first year. For the eighth grade examinations of 1901 the algebra only will be required, and thereafter both the algebra and geometry, as outlined in the course.

Teachers who desire to do number work in the first and second grades should use for a guide a good primary text, such as—

The Wooster Arithmetics, Crane & Co.
Arithmetic by Grades (Prince's), Ginn & Co.
Spear's Arithmetic for Primary Teachers, Ginn & Co.
Arithmetic by Grades (Nichol's), Thompson, Brown & Co.

7. Do something with art work in some form. After studying the suggestions in the manual, get some good book as a guide, and teach some of the work as the time will permit. Try to teach a love for pictures, and to this end use the Perry pictures, the Great Artist Series of the Educational Publishing Company, or Wilson's Picture Study by The Macmillan Company.

8. Emphasize with all eighth grade pupils that they are prepared upon graduating from the eighth grade to enter:

A High School.
A Normal School.
A preparatory course to the Agricultural College.
A preparatory course to the State University.

Always have a catalogue of each state educational institution in the schoolroom as an inspiration to eighth grade pupils to a higher education.

ACKNOWLEDGMENTS.

Acknowledgments are hereby given to the former state manual of Washington; to the state manuals of Montana, Kansas, Michigan, and Iowa; to the manuals of Chicago, Kansas City, Newark, Seattle, Tacoma, and other cities; and to all other sources from which extracts and ideas have been taken.

FRANK J. BROWNE,
President State Board of Education.

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